ANNUAL REPORT 2021

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INTRODUCING THE CENTRE

THE ARC CENTRE OF EXCELLENCE IN POPULATION AGEING RESEARCH (CEPAR) IS A UNIQUE COLLABORATION BETWEEN ACADEMIA, GOVERNMENT AND INDUSTRY, COMMITTED TO DELIVERING SOLUTIONS TO ONE OF THE MAJOR ECONOMIC AND SOCIAL CHALLENGES OF THE 21ST CENTURY.

The Centre is based at the University of New South Wales (UNSW Sydney) with nodes at the Australian National University (ANU), Curtin University, the University of Melbourne and the University of Sydney, and has high quality partnerships with influential organisations drawn from academe, government and business.

It aims to establish Australia as a world leader in the field of population ageing research through a unique combination of high-level, cross-disciplinary expertise drawn from Actuarial Science, Demography, Economics, Epidemiology, Psychology, Industrial Relations, Organisational Behaviour and Sociology.

Funded primarily by an initial seven-year grant from the Australian Research Council, with generous support from the collaborating universities and partner organisations, the Centre was established in March 2011 to undertake high-impact, independent, multidisciplinary research and build research capacity in the field of population ageing.

Renewed funding awarded for an additional seven-year term from 2017-2023 is supporting an exciting new research program which will deliver comprehensive outcomes with the potential to secure Australia's future as a well-informed nation with world-best policy and practice for an ageing demographic.

VISION

OUR VISION IS TO BE A GLOBALLY LEADING RESEARCH AUTHORITY ON POPULATION AGEING.

MISSION

OUR MISSION IS TO PRODUCE AND PROMULGATE RESEARCH OF THE HIGHEST QUALITY TO OPTIMISE SOCIAL AND ECONOMIC OUTCOMES FOR AN AGEING WORLD.

OBJECTIVES

THE OBJECTIVES OF THE CENTRE ARE TO:

EXECUTE A TRANSFORMATIONAL AND MULTIDISCIPLINARY RESEARCH PROGRAM THAT

- produces original research that advances knowledge globally, published in leading international journals
- harnesses expanded research capability to generate evidence and policy analysis to address the most critical issues identified by individuals, industry, government and community groups
- anticipates and responds constructively to rapid demographic transition in Australia and internationally

EFFECTIVELY ENGAGE WITH EXTERNAL STAKEHOLDERS AS AN INTEGRAL PART OF THE CENTRE'S RESEARCH ACTIVITY TO

- develop research goals and to share in project execution
- translate research to influence economic and social policy, business practice, and community understanding

BUILD NATIONAL RESEARCH CAPABILITY AND COLLABORATION BY

- creating new researcher cohorts devoted to ageing research and trained in cross-disciplinary skills
- developing the research leadership and end-user engagement skills of early and mid-career researchers
- taking a leadership role by connecting researchers in ageing throughout Australia, ensuring that benefits from CEPAR's inclusive culture are fully realised

ELEVATE CEPAR'S, AND BY EXTENSION AUSTRALIA'S, REPUTATION AS A GLOBAL LEADER IN POPULATION AGEING RESEARCH BY

- strategically partnering with world-class institutions leading innovative research in the field
- connecting with researchers and centres focused on population ageing throughout the world.

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DIRECTOR'S REPORT

PROFESSOR JOHN PIGGOTT

IN COMMON WITH ORGANISATIONS AND INDIVIDUALS THROUGHOUT THE WORLD, 2021 MARKED THE SECOND STRAIGHT YEAR WHEN COVID-19 RESTRICTIONS IMPACTED ON CEPAR'S ACTIVITIES. I WOULD LIKE TO BEGIN THIS REPORT BY PAYING TRIBUTE TO THE CEPAR COMMUNITY.

EVERYONE, FROM THE ADVISORY BOARD TO PHD STUDENTS, WORKED HARD TO OVERCOME THE CHALLENGES IMPOSED BY COVID-19, AND THE RESULT IS THAT WE CAN REPORT ANOTHER SUCCESSFUL YEAR.

Despite a decrease in opportunities to meet in person, record numbers of attendees came to CEPAR and CEPAR-affiliated virtual events. In fact, we achieved greater reach in terms of number and diversity of participants in the events we organised than ever before, a welcome side effect of the restrictions which led to so many of these being held on-line.

Throughout the year, CEPAR continued to engage with stakeholders and translate its research with a view to influencing policy, business practice and community understanding. Aged care funding has been a particular focus this year, with a number of related outputs being generated. In the events space, CEPAR and the UNSW Ageing Futures Institute co-hosted an online webinar on financing and sustainability of future proofing aged care. At the annual Colloquium on Pensions and Retirement Research, CEPAR members chaired two sessions on Aged Care Financing (one by Advisory Board Chair, Marc de Cure and the other by Associate Investigator Katja Hanewald). Additionally, a special purpose board meeting was convened focusing on financing aged care. This meeting, again chaired by de Cure, provided an opportunity for two-way engagement into this important topic. A number of publications have also been released including Chief Investigator (CI) Michael Sherris's *Australian Economic Review* paper and the Actuaries Institute Green Paper, on which I served as an Advisor.

In other engagement activity, CEPAR was involved with the Retirement Income Covenant. Several CEPAR personnel were invited to participate in a COTA conference on this topic, discussions at which were used to inform COTA's government submission. CEPAR's Annual Colloquium on Pensions and Retirement Research also featured a panel discussion devoted to this topic with panel members coming from The Treasury, APRA, Cbus and Challenger.

CEPAR was involved, both directly and in-directly, with The Treasury's Intergenerational Report which was released earlier this year. The report projects an outlook for the economy and the Australian Government's budget over the next 40 years and provides the government's assessment of the changing demography in Australia over the long term. It draws in part on projections and research conducted by CEPAR senior researchers, namely an overlapping generations model of the Australian economy (OLGA) which was developed with assistance from Senior Research Fellow George Kudrna and Associate Investigator Chung Tran; advice on climate change responses to the macro-economy provided by CI Warwick McKibbin; and projections of fertility rates made by CI Peter McDonald. CEPAR played a role in interpreting the report as well, through an Op-Ed in the *Australian Financial Review* (CI Peter McDonald and Assoc Prof Jeromey Temple); analysing the report findings in *The Conversation* (Senior Research Fellow Rafal Chomik); and discussing the report findings on ABC's *The Economists* show.

The publicly available CEPAR Metadata Database on Ageing, developed by a team led by Jeromey Temple at the University of Melbourne and launched in May, created a major online webtool to assist researchers working in ageing to understand what survey data is available in Australia and how to gain access, as well as government, industry, and community stakeholders.

Additional funding was awarded this year to extend stakeholder-relevant research. This included grants for projects focused on developing and testing an organisational intervention to reduce risks in the aged care sector (Senior Research Fellow Daniela Andrei, CI Sharon Parker, Research Fellow Jane Chong), on ways to improve advance care planning (Research Fellow Craig Sinclair) and examining relationships between socioeconomic position

and blood pressure, vision, dementia and epilepsy (Research Fellow Saman Khalatbari-Soltani).

The Ageing Asia Research Hub has continued to develop over the past 12 months. From 1 July, the Hub has a newly appointed Director, Professor Philip (Pip) O'Keefe. Pip joins CEPAR from a long and distinguished career at the World Bank where he most recently held the role of Practice Manager for Social Protection and Jobs for the East Asia and Pacific region. He had also served on the CEPAR Advisory Board for several years. A particular research highlight from the year comes from a conference co-hosted by the Asian Development Bank focused on the health and socioeconomic well-being of older persons in developing Asia. CEPAR researchers secured 3 of the 17 research presentation slots, contributing to evidence-based policymaking in the region. I look forward to seeing the Hub's reach and engagement grow under Pip's leadership.

This year also brought CEPAR's mid-term review (MTR), an activity all Centres of Excellence undergo halfway through their funding term. Measured against a number of indicators including the seven ARC Centre of Excellence Program objectives, CEPAR was judged to have met all to a high standard. We have responded to all the recommendations that flowed through from the Review, and implementation has already begun. We walk away from the exercise refocused and reenergised for the second half of our funding term.

With the ARC's encouragement and stemming from the MTR, CEPAR is increasing its emphasis on the area of Equity, Diversity and Inclusion (ED&I). We had already established an ED&I network, and this year the network expanded considerably. We have dedicated time at annual events to report on ED&I activities. This year we invited an Aboriginal leader to our annual workshop to discuss related topics. We had previously created an acting Director of ED&I role within CEPAR (CI Marian Baird),
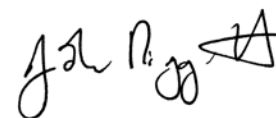
this year we formalised it creating Co-Director roles (CIs Marian Baird and Kaarin Anstey). In the coming year we expect ED&I activities and initiatives to expand further, and we look forward to an increasing number of opportunities to develop our footprint in this area.

The annual workshop this year was again held in virtual mode. The two-day event commenced with the aforementioned ED&I presentation made by Aboriginal leader, Lisa Sarago. Lisa's presentation, introducing diversity and inclusion of Aboriginal and Torres Strait Islander cultures in Australian research and work places, provided valuable insights into these topics. The stream reports, a key feature of the event each year, covered progress to date and looked forward to 2022 plans and beyond. Poster presentations were another element of the event, which provided CEPAR students, early career and mid-career researchers with an opportunity to showcase their research to the broader CEPAR community. Prizes for 'People's Choice Best Poster Presentation' and 'Best Poster Presentation' went to PhD Students Lucinda Iles (from the Curtin node) and Roshen Fernando (from the ANU node), respectively. Although it proved to be another successful event, we very much look forward to an in person annual workshop in 2022.

Our Chief Investigators continue to impress. CI Sharon Parker was named as one of Australia's Top 40 Lifetime Achievers in Research in *The Australian's 2021 Research Special Report*. This honour is made in recognition of consistent excellence in work and the impact had in the recipient's research field. Some of the notable statistics used to determine Sharon's performance included attracting over $40,000,000 in competitive research funding, publishing over 150 academic articles and receiving more than 26,000 citations of her work.

A number of other awards and recognitions were bestowed on our research team throughout the year. To highlight a few, Senior Research Fellow Tim Neal was awarded the Academy of Social Sciences in Australia's prestigious Paul Bourke Award. CI Kaarin Anstey was recognised by the *Mental Health & Prevention Journal* with a Mental Health and Prevention Senior Career Researcher Award. CI Marian Baird was awarded an Australian Labour and Employment Relations Association Distinguished Lifetime Service Award, and CI Hazel Bateman and Associate Investigators Julie Agnew, Christine Eckert, Fedor Iskhakov and Susan Thorp received a 2021 Center for Financial Planning Board Best Paper Award for their paper: *Who pays the price for bad advice?*

CEPAR's professional team has continued to play a key role in supporting the Centre to allow it to meet its strategic and research goals. During 2021 there have been some major organisational changes with Anne Gordon, long-standing CEPAR Director of Operations, taking a well-earned period of extended leave and CEPAR Management Accountant Colleen Faes-Scott acting in the role, in Anne's absence. As with all changes, it has presented opportunities for the team to develop new skills. I congratulate the professional team for delivering to such a high standard while adjusting to the new team composition.

John Piggott

2021 HIGHLIGHTS

29TH ANNUAL COLLOQUIUM ON PENSIONS AND RETIREMENT RESEARCH HOSTED BY CEPAR AND UNSW SCHOOL OF RISK AND ACTUARIAL STUDIES

POLICY DIALOGUE ON MATURE WORKERS IN ORGANISATIONS HELD IN CANBERRA IN COLLABORATION WITH THE CENTRE FOR APPLIED MACROECONOMIC ANALYSIS (CAMA) AND CRAWFORD SCHOOL OF PUBLIC POLICY AT THE AUSTRALIAN NATIONAL UNIVERSITY

VIRTUAL FORUM ON FINANCING AND SUSTAINABILITY OF FUTURE PROOFING AGED CARE HELD IN COLLABORATION WITH THE UNSW AGEING FUTURES INSTITUTE

VIRTUAL INTERNATIONAL PENSION RESEARCH ASSOCIATION (IPRA) CONFERENCE AND WEBINARS HOSTED BY CEPAR IN COLLABORATION WITH THE OECD AND OTHER IPRA MEMBER INSTITUTIONS

19TH NATIONAL CONFERENCE OF EMERGING RESEARCH IN AGEING HELD VIRTUALLY

LAUNCH OF CEPAR MATURE WORKERS IN ORGANISATIONS (MWOS) VIRTUAL SYMPOSIUM SERIES

LAUNCH OF CEPAR RESEARCH BRIEF: 'TAPPING INTO AUSTRALIA'S AGEING WORKFORCE: INSIGHTS FROM RECENT RESEARCH'

LAUNCH OF PUBLICLY AVAILABLE METADATA DATABASE DEVELOPED BY A CEPAR RESEARCH TEAM LED BY JEROMEY TEMPLE

LAUNCH OF CEPAR FACT SHEET: 'PEAK PERFORMANCE AGE IN SPORT'

RELEASE OF CEPAR FACT SHEET: 'HOW MEN AGE: INSIGHTS FROM THE CHAMP STUDY'

RELEASE OF CEPAR INDUSTRY REPORT: 'AN EMPLOYER LENS ON COVID-19: ADAPTING TO CHANGE IN AUSTRALIAN WORKPLACES'

CHIEF INVESTIGATOR HAZEL BATEMAN APPOINTED AS CHAIR OF THE SCIENTIFIC COUNCIL OF THE NETWORK FOR STUDIES AND PENSIONS, AGING AND RETIREMENT (NETSPAR)

SENIOR RESEARCH FELLOW DANIELA ANDREI, CHIEF INVESTIGATOR SHARON PARKER AND RESEARCH FELLOW JANE CHONG AWARDED $373,762 IN SAFE WORK AUSTRALIA RESEARCH GRANT SCHEME FUNDING TO DEVELOP AND TEST AN ORGANISATIONAL INTERVENTION TO REDUCE PSYCHOSOCIAL RISKS IN THE AGED CARE SECTOR

CHIEF INVESTIGATOR KAARIN ANSTEY ELECTED AS FELLOW OF THE AUSTRALIAN ACADEMY OF HEALTH AND MEDICAL SCIENCES IN RECOGNITION OF HER OUTSTANDING CONTRIBUTIONS TO RESEARCH IN COGNITIVE AGEING AND DEMENTIA

CHIEF INVESTIGATOR HAZEL BATEMAN APPOINTED AS CHAIR OF THE SCIENTIFIC COUNCIL OF THE NETWORK FOR STUDIES AND PENSIONS, AGING AND RETIREMENT (NETSPAR)

RESEARCH FELLOW CRAIG SINCLAIR AWARDED $955,828 IN NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL TARGETED CALL FOR RESEARCH GRANT FUNDING FOR A PROJECT TITLED THE ENHANCED ADVANCE CARE PLANNING AND LIFE REVIEW LONGITUDINAL INTERVENTION

CHIEF INVESTIGATOR MICHAEL KEANE ELECTED AS FELLOW OF THE SOCIETY OF LABOR ECONOMISTS IN RECOGNITION OF HIS DISTINCTIVE CONTRIBUTIONS TO THE FIELD

CHIEF INVESTIGATOR WARWICK MCKIBBIN APPOINTED AS FELLOW OF THE CENTRE FOR ECONOMIC POLICY RESEARCH

CHIEF INVESTIGATOR WARWICK MCKIBBIN APPOINTED TO THE EDITORIAL BOARD OF THE NATIONAL INSTITUTE OF ECONOMIC AND SOCIAL RESEARCH IN LONDON

CHIEF INVESTIGATOR SHARON PARKER NAMED AS ONE OF AUSTRALIA'S TOP 40 LIFETIME ACHIEVERS IN RESEARCH ACCORDING TO THE AUSTRALIAN'S 2021 RESEARCH SPECIAL REPORT

CHIEF INVESTIGATOR KAARIN ANSTEY RECOGNISED BY MENTAL HEALTH & PREVENTION JOURNAL WITH THE MENTAL HEALTH AND PREVENTION SENIOR CAREER RESEARCHER AWARD FOR HER DISTINGUISHED SERVICE AND OUTSTANDING CONTRIBUTIONS TO RESEARCH

PROFESSOR MARIAN BAIRD AWARDED AUSTRALIAN LABOUR AND EMPLOYMENT RELATIONS ASSOCIATION DISTINGUISHED LIFETIME SERVICE AWARD

CHIEF INVESTIGATOR HAZEL BATEMAN AND ASSOCIATE INVESTIGATORS JULIE AGNEW, CHRISTINE ECKERT, FEDOR ISKHAKOV AND SUSAN THORP RECOGNISED WITH THE 2021 CENTER FOR FINANCIAL PLANNING BOARD BEST PAPER AWARD FOR THEIR PAPER: WHO PAYS THE PRICE FOR BAD ADVICE? THE ROLE OF FINANCIAL VULNERABILITY, LEARNING AND CONFIRMATION BIAS

CHIEF INVESTIGATOR HAZEL BATEMAN AWARDED THE UNSW BUSINESS SCHOOL DEAN'S DISTINGUISHED LEADERSHIP AWARD IN RECOGNITION OF HER MERITORIOUS AND DISTINGUISHED LEADERSHIP AND EXCEPTIONAL CONTRIBUTIONS TO THE REPUTATION OF THE UNSW BUSINESS SCHOOL

SENIOR RESEARCH FELLOW TIM NEAL RECOGNISED WITH AN ACADEMY OF SOCIAL SCIENCES IN AUSTRALIA EARLY CAREER RESEARCH AWARD

CHIEF INVESTIGATORS JOHN PIGGOTT AND MICHAEL SHERRIS, AND SENIOR RESEARCH FELLOW GEORGE KUDRNA RECEIVED HIGHLY COMMENDED UNSW BUSINESS SCHOOL RESEARCH IMPACT AWARDS, RECOGNISING THE IMPACT ACHIEVED OUTSIDE ACADEMIA AND CONTRIBUTIONS TO KNOWLEDGE EXCHANGE

CEPAR PHD STUDENT SHALLY ZOU AWARDED THE UNSW SCIENCE FACULTY PRIZE FOR BEST ENTRANT FROM PSYCHOLOGY FOR ONE-MIN THESIS COMPETITION

CEPAR PHD STUDENT DOREEN KABUCHE FINISHED IN THE TOP 3 IN THE UNSW BUSINESS SCHOOL'S 3 MINUTE THESIS COMPETITION

FORMER CEPAR PHD STUDENT DR MD MIJANUR RAHMAN AWARDED HAL KENDIG PRIZE FOR BEST CEPAR PHD THESIS IN 2020

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CHAIR'S MESSAGE

MARC DE CURE

THE ADVISORY BOARD'S PRINCIPAL ROLE IS TO DRIVE IMPACT BY FACILITATING TWO-WAY ENGAGEMENT BETWEEN CEPAR'S RESEARCH AND EXTERNAL USERS OF THAT RESEARCH. WE ALSO PLAY A VALUABLE ROLE AS OBJECTIVE COUNSEL AND A SOURCE OF ADVICE TO CEPAR'S CENTRE DIRECTOR AND MANAGEMENT COMMITTEE.

RESEARCH AND ENGAGEMENT

The CEPAR 2021 Annual Report is testament to the excellent research and engagement activity undertaken in conjunction with associated institutions and partners over the last year. It is a great document to understand the valuable research being conducted, and an opportunity to gain insight and learning from it.

Research and engagement activities have again been challenged by the COVID-19 pandemic, particularly where they involve physical interaction or creating new networks. Nevertheless, many positives have been learnt and there has been considerable forward movement.

The amount and quality of research was extensive and growing as the new streams increased their output after their initial start-up phases. Research sharing activity was fantastic albeit substantively virtual, with high quality local and international participation, insight and reach.

2021 saw a continued focus on retirement incomes and aged care; actuarial, demographic and overlapping generation economic modelling; and the Ageing Asia Research Hub was given added momentum with the appointment of new head Pip O'Keefe. New areas included research into organisation design for older workers, investigating how physical activity impacts brain health with age, increased Environment, Social and Governance (ESG) focus and the release of an open access ageing Metadata database.

The future looks bright with a strong momentum of high-quality research, coupled with a hybrid virtual and in person strategy. This is allowing personal connection whilst efficiently extending reach, reducing engagement costs and carbon footprint.

MID-TERM REVIEW

2021 also saw the ARC's mid-term review of CEPAR which involved a comprehensive coverage of research, engagement and administrative functions. It included a meeting with board members focused on their role and a separate meeting with partner organisations covering their engagement and interactions with CEPAR.

The ARC was very positive about the research activity and complimentary of the engagement activities and involvement of the Board. They issued a comprehensive report which included these comments and made some constructive suggestions for further enhancement.

BOARD ACTIVITY

Our meetings were all virtual, but the quality of the discussion and engagement was excellent. We also conducted a self-assessment of how well the Board was achieving its objectives. Following this and the mid-term review, we have made some refinements and plan to broaden the membership, deepen our exposure to CEPAR's expanding research output and increase our strategic focus.

Engagement continued to be very strong with members:

- chairing, speaking and actively participating in CEPAR policy dialogues, workshops, conferences and seminars;
- direct engagement with individual researchers, research streams and the Annual Workshop;
- supporting their organisation's engagement with research streams, often through Stakeholder Reference Groups, to provide a valuable more granular connection between the researchers and end-users; and

- discussions with and written partner organisation feedback to the ARC's mid-term review panel.

2021 saw changes to board composition but the engagement never wavered. We continued facilitating two-way engagement to both inform and disseminate research activities.

Farewell and thank you to those who left, welcome to new members who have joined and a special thanks to long standing members who continue to give freely of their time and insight. Finally, I'd like to thank the research teams who have energetically operated under challenging circumstances to develop new ways to research and engage.

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OUTLOOK

The Future looks promising with many major grant applications underway led by Chief Investigators. If successful, these will leverage CEPAR's achievements into new areas of research, knowledge and skills development. All research streams are preparing for a future beyond CEPAR - a critical element of any ARC Centre of Excellence.

The Board remains focused on ensuring that CEPAR finishes strongly and leaves a great legacy beyond its second seven-year term, and management are making excellent progress in this regard.

Marc de Cure
Chair CEPAR Advisory Board

ACTIVITY PLAN FOR 2022

In 2022 CEPAR will undertake a range of activities which aim to provide Australia, the greater Pacific region, and the world, with crucial new knowledge to inform social and economic responses to one of the most important challenges of the 21st century: population ageing. We will produce high quality research on issues that matter and disseminate outputs to those that can use it to drive impact; contribute to key agendas, policy initiatives, and product development; expand global collaborative networks; engage with the community; and build research capacity and capability to ensure CEPAR's sustainability.

ENGAGEMENT AND OUTREACH

A number of events are planned in 2022 to stimulate discussion on the issue and raise community awareness; engage with industry, government and the global research community; and raise the profile of the Centre. Some of these events were originally planned for 2021 but were postponed to 2022 as a result of the pandemic. Planned 2022 events include:

- A policy dialogue focused on individual decision making for and through retirement, and the impact of ageism, age expectations and cognitive health and impairment on these decisions, to be hosted in collaboration with the Australian National University's Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy in Canberra;
- A roundtable with stakeholders in Canberra on the topic of Cognitive Health and Decision Making;
- The 30th annual Colloquium on Pensions and Retirement Research in December in Sydney;
- A workshop on Data Linkage for Ageing Research, to be held in Canberra in collaboration with CAMA;
- The 2022 CAMA/CEPAR/Treasury Workshop to be held in Canberra;
- Diversity and Ageing Symposium to be held in September at UNSW Sydney;

- Mature Workers in Organisations (MWOS) Virtual Symposium Series held throughout the year;
- The second annual workshop on Understanding and Overcoming Confusion in Consumer Financial Decision Making to be held in August 2022 at UNSW Sydney;
- Research symposiums on
  – COVID-19 and Beyond: Challenges and Opportunities for an Age-Diverse Workforce;
  – Technology and Age at Work Era, both held in January at the European Association of Work and Organizational Psychology [online]; and
  – Gender and Work, alongside a workshop to be held in May at Queensland University of Technology;

- CEPAR's fortnightly seminar series on pensions, retirement and ageing; and
- Public talks featuring CEPAR personnel and distinguished visitors.

In addition, research briefs and fact sheets will be published on the following topics: ageing, morbidity and mortality among ethically and culturally diverse communities and on cognition and decision-making of older adults.

NATIONAL AND INTERNATIONAL NETWORKS

CEPAR will continue to expand its international footprint in 2022, especially in the Asia-Pacific region. The Ageing Asia Research Hub will be instrumental in the development of further linkages between CEPAR and key institutions in Asia as well as connecting with national researchers focused on this area of research.

CEPAR will also remain a very active member of the Association of Pacific Rim Universities (APRU) Population Ageing Hub, having played a leading role in its establishment.

Joint workshops and conferences with international collaborators will also support the

development of strong linkages. In 2022 these will include:

- The seventh annual conference of the International Pension Research Association to be co-organised by CEPAR in collaboration with Wharton, Netspar and WTW and hosted by the OECD in June in Paris;
- IPRA webinar series held in collaboration with Wharton, Netspar, WTW and the OECD held throughout the year

Nationally, the Centre will pursue a wide range of ongoing national collaborations as well as establish new linkages. Peter McDonald's team will continue to engage with the Commonwealth Treasury's Centre of Population as well as researchers based in the National Ageing Research Institute (NARI) on migrant ageing, carer needs, health literacy and dementia; Deakin University on preventable hospitalisations; Curtin University on ageing and food insecurity; University of Western Australia on Indigenous ageing; Charles Darwin University on Indigenous ageing and sexual minority populations; and University of Queensland on COVID-19 and ageing. Jeromey Temple will continue to serve on the Australian Institute of Health and Welfare's Aged Care Data Advisory Group. The Stream 3 team will continue its collaboration with Carers NSW examining the relationship between care intensity, negative work outcomes and impact of care service use using Carers NSW's National Carer Survey 2020 data. It will also commence a Safe Work Australia funded project focused on SMARTER work design in aged care. Hazel Bateman's team will continue to work with a number of super funds including Cbus and Aware Super.

Internationally, Peter McDonald's team will engage with researchers based in the Vienna Institute of Demography on regional population projections; the University of Leeds and the University of Toronto on projecting subnational

ageing; as well as continuing to engage with the International NTA Project. Warwick McKibbin will continue to collaborate online with researchers at the Brookings Institution, the World Bank and the International Monetary Fund throughout 2022. Stream 3 researchers will continue their collaboration with the research team led by Dr Jurgen Wegge at the Institute of Work, Organisational and Social Psychology at the Technical University of Dresden, on age differentiated leadership and age differentiated work systems. Marian Baird will work with the International Leave Research and Policy Network to convene an international workshop, scheduled for June 2022. Fiona Blyth's team will continue working on international collaborative projects focused on socioeconomic position, dietary pattern and pain (with collaborators from the Universities of Lausanne and Geneva) and social epidemiology (with researchers at the University of Toulouse). John Piggott and his team will continue collaborating with the Ragnar Frisch Centre for Economic Research and progress joint work with the East-West Centre and Korea Development Institute on population ageing and sustainable growth. Stream 4 researchers will undertake a joint research project with the Quebec National Institute for Social Research.

MENTORING AND RESEARCH TRAINING

The suite of mentoring programs developed by CEPAR to engage ECRs, Higher Degree Research (HDR) and undergraduate students will continue to be offered in 2022. A workshop will be organised in the latter part of the year offering CEPAR and non-CEPAR affiliated personnel the opportunity to learn state-of-the-art techniques from an international leader in research methods. The Stakeholder Engagement Program will equip researchers with the skills necessary to effectively engage with stakeholders and communicate social science research. A cross-nodal seminar series will provide

opportunities for emerging researchers to share their work with their colleagues and explore opportunities for collaboration. Subject to the relaxation of border restrictions, CEPAR will reactivate its academic exchange program to offer ECRs the opportunity to spend extended periods of time at other nodes or CEPAR partner institutions to advance the research program, expand their collaborations with Partner Investigators (PIs) or Associate Investigators (AIs) and to build their research networks. CEPAR will continue to support the Emerging Researchers in Ageing program. Summer scholarships will be offered to undergraduate students to offer a taste of life in a research centre.

To support the development of mid-career researchers CEPAR will continue to offer the very successful Future Leaders in Ageing Program in 2022.

RESEARCH

Research in 2022 will be advanced on a number of topics consistent with the four research streams identified in the CEPAR Strategic Plan. Specifically:

1 Macro-demographic dynamics and population ageing policy

Further detailed projection modelling including projections of regional and remote populations; living arrangements and households; and population by level of education.

Develop long-run post-COVID projection scenarios for Australia using a migrant status and birthplace model.

Analyse the demographic drivers of State/ Territory population ageing.

Complete a new research sub-project on 'Retirement Savings Plans': finish calibration and testing, then undertake policy simulations and write a working paper.

Incorporate couples-households in an overlapping generations model: complete specification and calibration, then undertake policy simulations.

Complete the estimation of the model related to Joint Retirement Timing Decisions, analyse results, and undertake policy simulations.

Continue development of the G-Cubed model with data updates as new data becomes available.

Build on the Gertler (1999) approach and implement four generations of cohorts into the new model (children, young workers, older workers and retirees).

Incorporate country specific age earnings profiles from the National Transfer Accounts (NTA).

Continue analysis of COVID-19 and incorporate Anti-Microbial Resistance (AMR) into G-Cubed model as part of infectious diseases and ageing modelling.

Publish three papers on NTA, which will draw on the completed NTA for 2015-2016.

2 Decision making, expectations and cognitive ageing

Analyse decision-making performance among older adult participants from the PATH W6 60+ cohort decision-making sub-study.

Investigate long-term cognitive trajectories including the role of functional impairment, care needs, family context, psychological variables, future planning care navigation and substitute decision-making behaviours.

Explore expectations of ageing via a scoping review to evaluate interventions.

Analyse cohort data to better understand predictors of age expectations.

Conduct an online experiment that will evaluate an intervention to promote more positive attitudes towards older adults.

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Build life-cycle models that include both liquid assets and illiquid housing assets, and analyse how this extension changes predictions about the behaviour of consumption.

Explore the use of deep reinforcement learning algorithms as a general solution method for structural estimation in economics.

Apply developed tools to new applications in rational choice theory and consumer behaviour.

3 Organisations and the mature workforce

Launch the Mature Workers in Organisations Survey (MWOS) longitudinal data collection (including a follow up on the Benchmark 2019 data).

Design and support the implementation of organisational interventions in collaborating organisations.

Continue to analyse data from MWOS COVID longitudinal survey and finalise comparisons with available pre-COVID data.

Finalise and submit for publication the validation study for the 3I HR management practices scale.

Commence new project on SMARTER work design in aged care (funded by the Safe Work Australia Project).

Progress project examining the relationship between care intensity, negative work outcomes, and impact of care service use (with Carers NSW using Carers NSW national survey data).

4 Sustainable wellbeing in later life

Develop predictive models including: aggregate mortality models in both discrete- and continuous-time using data analytic techniques to mortality models; and health and functional disability using US HRS and Chinese longitudinal data.

Focus on Australian data (aggregate and individual) for mortality, health status, and functional disability modelling including: use of Survey of Disability, and Ageing and Carers (SDAC), Household Income and Labour Dynamics in

Australia (HILDA), Department of Health and Australian Institute of Health and Welfare (AIHW) data.

Model mortality and functional disability with assistance from other research streams.

Estimate the transition probabilities to be used in projections following the completion of the base population for the microsimulation model of the Australian population.

Complete subprojects within 4.3 Social Determinants of Successful Ageing examining research areas including: Socioeconomic Inequalities in Pain; Dietary Pattern and Pain; Blood pressure, Retinal Microvascular Abnormalities, and Dementia: Considering Socioeconomic Position; Life Course Intra-Generational Social Mobility and Mortality; Mortality of Ethnic Minority Groups in the UK; Representation of Ethnic Minorities in Dementia Risk Factor Research; Methodological Aspects of Social Epidemiology; and Older Men's Experience During COVID-19 Pandemic.

Complete information collection on measurements on social and environmental and healthy ageing domains in CHAMP and all other ageing cohort studies in Australia and across the world, and create repository on CEPAR website.

Continue with the Norwegian data analysis on program substitution.

Research retirement policy and female labour responses at mature age and innovative pension systems in China.

Further research on population ageing and sustainable growth

Publish the book, 'Long-Term Care Policy Design and Responses in Emerging Asia' (Routledge).

Examine trends in spatial life expectancy inequality in Australia.

Actuarial and financial assessment of innovative group risk sharing products: Lifetime Income Products; Life Care Pooled Annuities (LCPA); Flexible Variable Annuities with Long-term Care; and Equity Release.

Study fair and effective methods of allowing for liquidity, withdrawals, and surrenders in longevity products.

Develop portfolio strategies, including target volatility, considering costs and risks.

Incorporate mortality heterogeneity, health status, and payments in pooled annuity funds (PAF) and LCPA.

Commence dynamic structural lifecycle model of Cbus super fund choice architecture.

Extend benefit projections experiments to decumulation phase (retirement income projections).

Combine Aware Super member admin data with survey data on 'behavioural responses to market volatility' and finalise write-up.

Further explore strategies to use home equity to fund retirement.

In addition, we will continue to focus on building cross-stream collaboration through workshops and joint projects and work closely with our partner organisations, especially through the Stakeholder Reference Groups, to enhance collaboration and facilitate access to data and other resources.

SECTION 1

GOVERNANCE & STRUCTURE

GOVERNANCE

Our governance structure is designed to ensure the efficient operation of the Centre, maximise performance and support strategic planning.

At its core are the Management Committee and the Centre Management Team, which are responsible for the execution of Centre activities.

Three external committees support strategic development as well as engagement between researchers, industry and government. The International Scientific Advisory Committee, Centre Advisory Board and the Leaders' Forum provide the Management Committee with external perspectives on the formulation of research programs, their implementation, and the

dissemination of research outcomes. In addition, Stakeholder Reference Groups (SRGs) facilitate stakeholder interaction and provide opportunities for end users to shape the direction of the Centre's research program and activities.

CEPAR ORGANISATIONAL CHART

INTERNATIONAL SCIENTIFIC ADVISORY COMMITTEE	MANAGEMENT COMMITTEE	ADVISORY BOARD	EXECUTIVE ADVISORY COMMITTEE

CAREER DEVELOPMENT SUBCOMMITTEE	RESEARCH SUBCOMMITTEE	RESEARCH TRANSLATION & OUTREACH SUBCOMMITTEE

1 Macro-demographic dynamics & population ageing policy	2 Decision making, expectation & cognitive ageing	3 Organisations & the mature workforce	4 Sustainable wellbeing in later life

STAKEHOLDER REFERENCE GROUPS

INTERNATIONAL SCIENTIFIC ADVISORY COMMITTEE

The International Scientific Advisory Committee, comprising international leaders in the area of population ageing, provides advice on the strategic direction of the Centre from a global perspective, with emphasis on research programs. Drawn from a range of fields, reflecting the Centre's multidisciplinary nature, and with influential positions in academe and policy, members of the Committee also identify and facilitate linkage opportunities as well as act as ambassadors for the Centre, actively building its global profile.

The Scientific Advisory Committee comprises:

Richard Blundell, Professor of Political Economy, University College London, and Director, ESRC Centre for the Microeconomic Analysis of Public Policy, Institute for Fiscal Studies

Eileen Crimmins, Professor of Gerontology, University of Southern California, and Director, USC/UCLA Centre for Biodemography and Population Health

Cai Fang, Professor of Economics and Deputy Director, Chinese Academy of Social Sciences

Sarah Harper, Professor of Gerontology, University of Oxford, and Co-Director Oxford Institute of Ageing

Ayse Imrohoroglu, Professor of Finance and Business Economics, USC Marshall School of Business

Ron Lee, Edward G. and Nancy S. Jordan Family Professor Emeritus of Economics; Professor Emeritus of Demography; Associate Director, Center for the Economics and Demography of Aging (CEDA)

Robert A Moffitt, Krieger-Eisenhower Professor of Economics, Johns Hopkins University

Carol Ryff, Professor of Psychology and Director of Institute on Aging, University of Wisconsin-Madison

Yasuhiko Saito, Professor, University Research Center and Adjunct Professor at the School of Medicine at Nihon University, Tokyo, Japan

Merril Silverstein, Marjorie Cantor Chair in Aging Studies, Syracuse University

James P. Smith, Senior Economist, Rose Li and Associates

Mo Wang, Lanzillotti-McKethan Eminent Scholar Chair at the Warrington College of Business, and Department Chair of the Management Department and the Director of Human Resource Research Center, University of Florida.

ADVISORY BOARD

The Advisory Board plays a critical role in supporting the realisation of the Centre's goals by providing an external perspective on the formulation of research programs and their implementation, and strategies for the translation of research findings to effectively influence economic and social policy, business practice, and community understanding. It facilitates two-way engagement between stakeholders and researchers and provides independent advice to the Management Committee regarding strategy and external relations, as well as new opportunities for engagement.

The Board comprises delegates of organisations providing financial support to CEPAR, along with a broader membership representing research, policy and community groups. Members are appointed by the Director in consultation with the Chair and Management Committee, for a term of three years.

In 2021, the Board met as a group on 17 March and 3 August. Both meetings focused on maximising impact of CEPAR's brand and the quality of engagement, and research translation with the former also covering the mid-term review. The Board also provided advice on priority topics for future CEPAR research translation initiatives.

As well as the formal meetings, there was a Special Purpose Advisory Board meeting held on 22 November focused on aged care funding; and the Director and Chair met bilaterally with individual members on a number of occasions to discuss particular issues.

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GOVERNANCE

2021 ADVISORY BOARD MEMBERS

MARC DE CURE	Chair, Adjunct Professor, UNSW Sydney
SARAH BUTLER	Partner, PwC Global/Health Services and NSW Government Lead Partner, PricewaterhouseCoopers
MATTHEW FLAVEL	Deputy Secretary, Social Security, Department of Social Services
BRENTON GOLDSWORTHY	First Assistant Secretary Economic, Department of the Prime Minister and Cabinet (to 5 February 2021)
JENNY GORDON	Chief Economist, Department of Foreign Affairs and Trade (to 3 November 2021)
DAVID GRUEN AO	Australian Statistician, Australian Bureau of Statistics
ROSS HAWKINS	First Assistant Secretary Reform Implementation Division, Department of Health (from 24 August 2021)
NATALIE HORVAT	First Assistant Secretary Economic, Department of the Prime Minister and Cabinet (from 14 July 2021)
TIM STEELE	Group Executive, Retirement & Investment Solutions, MLC Wealth (till 30 June 2021)
MARGOT MCCARTHY	Special Advisor, Department of Health (to 22 July 2021)
MEGHAN QUINN	Deputy Secretary, Markets Group, Commonwealth Treasury
PHILIP O'KEEFE	Practice Manager, Social Protection and Jobs Global Practice, East Asia and Pacific, World Bank Group (to 30 June 2021)
MICHAEL ORSZAG	Head of Global Research, Willis Towers Watson (WTW)
ROBERT PALACIOS	Lead Economist, World Bank Group (from 27 July 2021)
THE HON DR KAY PATTERSON AO	Age Discrimination Commissioner, Australian Human Rights Commission
JOHN SIMON	Head, Economic Research, Reserve Bank of Australia
STEPHEN WALTERS	Chief Economist, NSW Treasury
IAN YATES AM	Chief Executive, Council on the Ageing

MARC DE CURE
BCom (Hons) UNSW, MWine
Quality UWS, FCA
CHAIR, ADVISORY BOARD

Marc de Cure has recognised since 2001 the social and economic significance of demographic change and the need to undertake and promulgate research to inform government policy, social awareness and commercial responses. He played a key role in establishing CEPAR and provides critical input to the development of the Centre's ongoing strategy, research translation and engagement activities. He has chaired both the Advisory Board and the Leaders' Forum since inception.

Marc has been a member of the Business Advisory Council of the UNSW Business School since 2001 and was appointed as an Adjunct Professor at the UNSW Business School in 2015. He holds a Bachelor of Commerce (Honours) from UNSW and is a Fellow of the Institute of Chartered Accountants ANZ.

Marc has been a non-executive company director and senior executive in financial and professional services groups globally. He was AIA Group's Executive Vice President & CFO and AMP Group's CFO, Executive General Manager Strategy and Executive General Manager responsible for AMP Bank and Virgin Money, and a senior partner in PwC and Bain & Co and AMP's Asian and European Operations.

CEPAR EX-OFFICIO REPRESENTATIVES ON THE ADVISORY BOARD

COLLEEN FAES-SCOTT	Acting Director of Operations
WARWICK MCKIBBIN	Director of Policy Engagement
JOHN PIGGOTT	Director
MICHAEL SHERRIS	Director of Industry Engagement

STAKEHOLDER REFERENCE GROUPS

The role of the Stakeholder Reference Groups (SRGs) is to facilitate stakeholder interaction with CEPAR researchers and promote research translation and knowledge transfer. SRGs also provide opportunities for end users to shape the direction of the Centre's research program and activities. Membership comprises the Stream Leader (as Chair), the Stream Coordinator, the leaders of each of the Stream's projects (or their nominees), relevant representatives of CEPAR's partner organisations plus additional members drawn from business, government and community circles as appropriate.

In 2021, each Research Stream held an annual meeting. The meetings provided an opportunity to review research output over the previous 12 months, identify opportunities and research gaps, share resources, and set goals for the next 12 months to two years.

Schedule of meetings:

Stream 1 SRG: 18 November 2021
Stream 2 SRG: 22 November 2021
Stream 3 SRG: 26 October 2021
Stream 4 SRG: 17 November 2021

MANAGEMENT COMMITTEE

The Management Committee, together with the Centre Director, has overall responsibility for Centre performance and for ensuring that the Centre's activities are conducted in accordance with the Funding Agreement between UNSW Sydney and the ARC. Its role is to oversee all operational matters, including budget management, approval of specific major programs, staffing, approval of visitors and organisation of workshops. In strategic planning, the Committee seeks high level advice from the Centre Advisory Board, International Scientific Advisory Committee and Leaders' Forum.

The Committee is chaired by Chief Investigator Alan Woodland and in 2021 comprised:

JOHN PIGGOTT	Centre Director
KAARIN ANSTEY	Deputy Director and Chief Investigator
MARIAN BAIRD	Chief Investigator and University of Sydney Node Leader
HAZEL BATEMAN	Deputy Director, Chief Investigator and University of New South Wales Node Leader
COLLEEN FAES-SCOTT	Acting Director of Operations
PETER MCDONALD	Chief Investigator and University of Melbourne Node Leader
WARWICK MCKIBBIN	Chief Investigator and Australian National University Node Leader
SHARON PARKER	Chief Investigator and Curtin University Node Leader

In 2021, the Committee met on 5 March, 1 June, 3 September and 29 November. Consultation also took place via email to handle research management decision-making tasks.

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GOVERNANCE

The Management Committee is supported by three subcommittees:

RESEARCH SUBCOMMITTEE

Chaired by the Centre Director, the subcommittee comprises all the Chief Investigators, the Stream Coordinators, the Director of Operations and the Senior Administrative Officer (Research and Mentoring Support). In 2021, the subcommittee met on 16 March, 27 July and 9 November. In addition, members of the research subcommittee participated in CEPAR's virtual Annual Workshop on 2-3 November which included detailed discussions about research progress, future directions and opportunities for intra and inter stream collaboration.

MENTORING SUBCOMMITTEE

The subcommittee comprises the two Directors of Mentoring, Sharon Parker and Marian Baird, the Centre Director, the Director of Operations, the Senior Administrative Officer (Research and Mentoring Support) and Emerging Researchers in Ageing (ERA) representative Matthew Carroll. In addition, the Centre's mid-career researchers were represented by Daniela Andrei, Katja Hanewald, Cagri Kumru, Ruth Peters and Gaoyun (Sophie) Yan; early-career researchers were represented by Inka Eberhardt, Saman Khalatbari-Soltani, Akshay Shanker and Peyman Firouzi Naeem; and PhD students were represented by Cheng Wan and Lisa Gulesserian. The subcommittee, chaired by Sharon Parker met on 31 March, 23 July and 14 October 2021. A renaming of the subcommittee, to the Career Development subcommittee, to better reflect its purpose was proposed at the meeting of 23 July, and approved at the Management Committee meeting of 3 September.

RESEARCH TRANSLATION AND OUTREACH SUBCOMMITTEE

The subcommittee was chaired this year by the Director of Policy Engagement, Warwick McKibbin, and comprises the Director of Industry Engagement Michael Sherris, the Centre Director,

Deputy Director and Chief Investigator, Hazel Bateman, the Director of Operations, the Senior Research Fellow – Research Translation, the Senior Administrative Officer (Stakeholder Relations and Governance), and the Communications, Marketing and Events Coordinator. The subcommittee met on 7 April, 6 July and 1 November 2021.

CENTRE ADMINISTRATION AND OPERATION

Since its formal establishment on 28 September 2017, CEPAR has made significant inroads in the development of the organisational framework necessary to effectively administer and optimise the achievements of the Centre. Progress has been made in the six key domains prescribed by the Australian Research Council in the Funding Agreement:

STRATEGIC PLANNING

CEPAR's Strategic Plan is a living document shaped by ongoing consultation with a wide range of CEPAR personnel and its stakeholders. It is augmented and revised as new opportunities emerge, thus providing a roadmap and a structure that will assist CEPAR to continue to strive for excellence in population ageing research and enable it to achieve its full potential.

The strategic planning process involves regularly reviewing our progress towards fulfilling our objectives and vision for the Centre and discussing strategies for success to ensure the Centre is positioned to make the most of its capabilities and the opportunities provided by the collaborating universities, partners and the Australian Research Council.

As CEPAR transitioned into the second half of its funding term, the entire plan was carefully reviewed and revised. A particular aim of the revision was ensuring alignment existed between the current stage of the research program and CEPAR's strategic focus. Informing the revision were discussions with members of the Advisory

Board, Management Committee and its subcommittees. Feedback provided by CEPAR's International Scientific Advisory Committee was also incorporated into the updated plan.

EQUITY, DIVERSITY AND INCLUSION

CEPAR is committed to equity, diversity and inclusion (ED&I) in the workplace and has developed an Equity Plan outlining how CEPAR supports these concepts in practice.

The document *Equity and Diversity at CEPAR: Principles, Policy and Practice* positions CEPAR as an equal opportunity employer committed to the principles of cultural and age diversity, disability inclusion, gender equality, and LGBTIQ+ inclusion. It is supported by workplace and diversity policies, as well as codes of conduct, in place at each of its collaborating universities.

In addition, it sets out CEPAR-specific policies and practices designed to engender a culture of equity and diversity, to further support equity and diversity within the centre. These position the Centre as an equitable, flexible and family-friendly work environment.

In 2021 CEPAR continued to develop and expand the ED&I network established the year prior. In the second half of 2021, the ED&I directorship was formalised with the appointment of two co-Directors of ED&I – CI Professor Marian Baird, who was appointed as Interim Director in 2019, is continuing in the role and is joined by CI Professor Kaarin Anstey, effective from 2022. The group of ED&I Champions, which make up the ED&I network overseen by the co-Directors, also grew with three new appointees joining from November 2021. The Champions, who are located across all CEPAR nodes, promote ED&I at their node and make suggestions for improvement of the CEPAR ED&I policy and programs, model inclusive behaviour and language, and provide support to CEPAR-affiliated personnel and students regarding ED&I matters.

Throughout the year Professor Baird convened two formal meetings of the ED&I network with the focus primarily on identifying ED&I development areas and making plans on how to address these as CEPAR enters the second half of its funding term. Several informal impromptu meetings also took place during the year as did e-communications with ED&I Champions about how to progress ED&I matters.

In addition, Professor Baird and the ED&I network worked closely with Colleen Faes-Scott, Acting Director of Operations, to organise a Centre-wide workshop, held as part of the CEPAR Annual Workshop, introducing diversity and inclusion of Aboriginal and Torres Strait Islander cultures in Australian research and workplaces to the CEPAR community, over 70 of whom were in attendance. The workshop was held as the first session over the two-day event and followed an Acknowledgement of Country. Both the Acknowledgement of Country and the session were performed and facilitated by Aboriginal leader, Yidinji/Yalaji woman Lisa Sarago, CEO of Goanna Solutions, an Indigenous enterprise based in Sydney. The workshop aimed to improve knowledge of ED&I principles and also introduced factors impacting research design when working with Indigenous communities. Lisa also highlighted key findings from *Gari Yala (Speak the Truth),* the first national survey of Aboriginal and Torres Strait Islander workers which was released in 2021.

2021 ED&I Champions were:

Kaarin Anstey, Chief Investigator, NeuRA, UNSW Sydney

Brooke Brady, Associate Investigator, NeuRA, UNSW Sydney

Lisa Gulesserian, PhD student, The University of Sydney

Warwick McKibbin, Chief Investigator, Australian National University

Kate O'Loughlin, Associate Investigator, The University of Sydney (from November 2021)

Gretchen (Gigi) Petery, Associate Investigator, Center for Disease Control, United States

Fiona Stanaway, Associate Investigator, The University of Sydney (from November 2021)

Michelle Vhudzijena, PhD Student, UNSW Sydney (from November 2021)

Silke Weiss, Communications, Marketing and Events Coordinator, UNSW Sydney

Tom Wilson, Principal Research Fellow, The University of Melbourne

DISCRETIONARY FUNDING

CEPAR has set aside discretionary funds to support a number of schemes, including a Distinguished Visitors Program, an International Conference Travel Scheme for HDR students, and an HDR and ECR Travel Grant Scheme to support extended visits to other nodes and affiliated institutions for the purpose of research collaboration.

CENTRE COHESION

Strategies to support the cohesion of the Centre, across nodes and disciplines, are embedded in everything the Centre does. The governance framework and Centre structure are designed to ensure that personnel from all five nodes participate in the decision making of the Centre; that partners have an opportunity to shape the direction of the research program and activities through membership of the Advisory Board and Stakeholder Reference Groups; and that researchers regularly come together to discuss and plan research across nodes and disciplines, both informally through regular visits and formally at Research Stream meetings and annual workshops.

Importantly, each of the nodes has a designated Node Leader who serves on the Centre Management Committee, and the Leadership team includes key positions based at the Australian National University (Director of Policy Engagement), Curtin University (Director of Mentoring – Mid-Career Researchers), the University of Sydney (Director of Mentoring – Emerging Researchers and co-Director of Equity, Diversity and Inclusion) and UNSW Sydney (Director and Deputy Directors, Director of Industry Engagement, co-Director of Equity, Diversity and Inclusion). Stream Leaders are based at the University of Melbourne, Curtin University and UNSW Sydney.

MENTORING AND PROFESSIONAL DEVELOPMENT

The Centre has developed a suite of programs designed to achieve its objective of creating new researcher cohorts devoted to ageing research, trained in cross-disciplinary skills, with the ability to engage with and respond to the needs of end-users. The programs, which are tailored to students, postdoctoral researchers and mid-career researchers, are outlined in the Research Training and Mentoring Section on pages 77-84.

RESEARCH TRANSLATION, COMMUNICATION, EDUCATION AND OUTREACH

The CEPAR Research Translation, Communication, Education and Outreach Plan, outlines a range of initiatives designed to translate Centre research, enhance the Centre's profile and address stakeholder needs. The Plan is reviewed annually. Key to its development in 2021 were discussions at meetings of the Advisory Board and the Management Committee and its three subcommittees. The outcomes for the year are outlined throughout the report.

The Plan is embedded in the CEPAR Strategic Plan. In addition, a list of initiatives in this portfolio will be developed each year and included as an appendix to the Strategic Plan.

STRUCTURE

CEPAR is based at the University of New South Wales (UNSW Sydney) with nodes at the Australian National University (ANU), Curtin University, the University of Melbourne and the University of Sydney. It is strongly supported by a number of key government, industry and international university partners.

NODES

The UNSW Sydney node, led by Professor Hazel Bateman, is hosted by the UNSW Business School and includes teams of researchers based in the Business School and Neuroscience Research Australia (NeuRA).

The ANU node is based in the Crawford School of Public Policy under the leadership of Professor Warwick McKibbin.

Professor Sharon Parker leads the Curtin University node based in the Centre for Transformative Work Design.

Professor Peter McDonald leads The University of Melbourne node, based in the School of Population and Global Health.

The University of Sydney node consists of teams in the School of Public Health and the Business School with Professor Marian Baird leading this node.

All the Chief Investigators (CIs) and many of the Centre's Associate Investigators (AIs) are based at one of the five nodes. Within Australia, Associate Investigators are also based at Macquarie University, the University of Newcastle, the University of Tasmania and the University of Technology Sydney. Other AIs are based at the Conexus Institute, Aware Super, National Seniors Australia, Pacific Life Re, and Taylor Fry.

PROGRAMS

The research program is organised into four interconnected streams:

Macro-Demographic Dynamics and Population Ageing Policy

Decision Making, Expectations and Cognitive Ageing

Organisations and the Mature Workforce

Sustainable Wellbeing in Later Life

INTERNATIONAL UNIVERSITY PARTNERS

Our Partner Investigators are drawn from three world-class research organisations:

The Brookings Institution

Center for Disease Control and Prevention

College of William and Mary

Colorado State University

CPB Netherlands Bureau of Economic Policy Analysis

Dutch Central Bank

Indonesian Ministry of National Development Planning (Bappenas)

Institut National de la Recherche Scientifique: Centre - Urbanisation Culture Société

Korea University

National Institute of Public Finance and Policy, New Delhi

National University of Singapore

Netspar

Newcastle University (UK)

Northern Illinois University

Portland State University

Purdue University

Ragnar Frisch Centre for Economic Research

Saint Louis University

South China Agricultural University

Tilburg University

Université Libre de Bruxelles

University of Bern

University of Duisburg-Essen

University of Exeter

University of Kent

University of Leeds

University of Leipzig

University of Limerick

University of Oxford

University of Parma

University of St. Gallen

University of South Florida

University of Trieste

University of Waterloo

University of Wuerzburg

Washington University in St Louis

WHU – Otto Beisheim School of Management

Zhejiang University

INDUSTRY AND GOVERNMENT PARTNERS

CEPAR is actively engaged with a range of influential government and industry partners to cooperatively deliver outcomes to meet the challenges and opportunities of population ageing. These include:

Australian Human Rights Commission

Department of Foreign Affairs and Trade

Department of Health

Department of Social Services

MLC

NSW Treasury

PricewaterhouseCoopers

Reserve Bank of Australia

The Treasury

The World Bank

WTW

In addition, the Centre is supported by Research Attraction and Acceleration Program (RAAP) funding from the NSW Department of Industry.

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CENTRE PERSONNEL

CHIEF INVESTIGATORS

SCIENTIA PROFESSOR JOHN PIGGOTT AO
BA Syd., MSc PhD Lond., FASSA
CENTRE DIRECTOR

John Piggott is Scientia Professor of Economics in the UNSW Business School.

A former Australian Professorial Fellow, he has published widely on issues in retirement and pension economics and finance, and in public finance more generally; his research has appeared in the leading international economics and actuarial academic journals as well as highly cited conference volumes. His national policy experience includes membership of both the Henry Tax Review Panel (2008-2009) and the Australian Ministerial Superannuation Advisory Committee (2007-2011).

John worked with the Japanese government for nearly a decade from 1999 on pension and population ageing issues. In 2007, he was appointed Visiting Professor at Zhejiang University in China, and from 2008-2010 he was Visiting Scholar at the Wharton School of Business. In 2018, he was awarded a Rockefeller Residency to undertake research into ageing and inequality in Asia.

In 2019, he was appointed co-chair of the Think20 (T20) Task Force on Aging Populations during Japan's G20 Presidency, and is currently a Commissioner on the US National Academy of Medicine's International Commission on Creating a Global Roadmap for Healthy Longevity.

SCIENTIA PROFESSOR KAARIN J. ANSTEY
BA (Hons) Syd., PhD Qld., FASSA, FAHMS, FRSN, FAPS
CHIEF INVESTIGATOR AND DEPUTY DIRECTOR

ARC Laureate Kaarin Anstey is Director of the UNSW Sydney Ageing Futures Institute focused on enabling optimal ageing for individuals and society and Senior Principal Research Scientist at Neuroscience Research Australia (NeuRA).

Kaarin's research programs focus on the causes, consequences and prevention of cognitive ageing, dementia, and common mental disorders in adulthood. A second focus is on older drivers' risk assessment and safety. Kaarin has worked extensively with longitudinal studies, the development of risk assessment tools, and interventions to optimise healthy ageing and mobility. Kaarin also leads the PATH Through Life Project, a large cohort study focusing on common mental disorders and cognitive function, based in the ACT and surrounding regions.

Kaarin is the Chair of the International Research Network on Dementia Prevention and a member of the Governance Committee of the Global Council on Brain Health, an initiative supported by the American Association of Retired Persons.

PROFESSOR HAZEL BATEMAN
BEc (Hons) Qld., PhD UNSW, GAICD
CHIEF INVESTIGATOR, DEPUTY DIRECTOR AND UNSW SYDNEY NODE LEADER

Hazel Bateman is a Professor of Economics in the UNSW School of Risk and Actuarial Studies.

Hazel researches consumer financial decision making especially as it relates to retirement accumulation and decumulation. Her work focuses on interventions to facilitate better retirement financial decisions; retirement insurance product design in Australia and China; home equity release to fund retirement; the demand for aged care insurance; and the taxation and regulation of pension and superannuation funds.

She is the author of over 70 peer-reviewed publications and book chapters and has been Chief Investigator on over a dozen ARC funded projects. Hazel has consulted on retirement income issues to international organisations including the OECD, the World Bank, the Social Insurance Administration (China) and the Korean Institute of Health and Social Affairs. She is the Chair of Netspar's Scientific Council and a member of the China Ageing Finance Forum and serves on the Advisory Board of the Mercer CFA Institute Global Pension Index, the Conexus Institute and MyHomeStream. Hazel is an editor of the *Journal of Pension Economics and Finance* and inaugural President of the International Pension Research Association (IPRA)

PROFESSOR MARIAN BAIRD AO
BEc (Hons) DipEd PhD Syd., FASSA
CHIEF INVESTIGATOR, DIRECTOR OF MENTORING (EMERGING RESEARCHERS) AND DIRECTOR OF ED&I

Marian Baird is Professor of Gender and Employment Relations, Head of the Discipline of Work and Organisational Studies, Co-Director of the Women, Work and Leadership Research Group in the University of Sydney Business School and a Presiding Pro-Chancellor of the University of Sydney. She is a Fellow of the Academy of the Social Sciences in Australia and in 2016 Marian was awarded an AO for outstanding services to improving the quality of women's working lives and for contributions to tertiary education. In 2019 she was named in *Apolitical's* Top 100 Most Influential People in Gender Equality list for the second year in a row. She is a leading researcher in the fields of women, work and family and is a highly recognised member of international networks on women, work and empowerment. Marian has received numerous grants from business and government to study parental leave in Australia, gender equitable organisational change, and work and family policy. She has contributed to a number of government advisory boards and reference groups relating to parental leave, gender equity and sexual harassment in the workplace.

PROFESSOR FIONA BLYTH AM
B Med Sci MBBS (Hons) UNSW,
MPH PhD Syd., FAFPHM
CHIEF INVESTIGATOR

Fiona Blyth is Professor of Public Health and Pain Medicine and Director of the Master of Clinical Epidemiology Program at the School of Public Health in the Faculty of Medicine and Health at the University of Sydney. She is a senior academic within the University's Centre for Education and Research on Ageing at Concord Hospital, and Co-Director of the Concord Hospital Healthy Ageing in Men Project (CHAMP) Study. She also works with the Sax Institute in knowledge translation (promoting the use of research evidence in health policy).

She is recognised internationally for her body of work defining chronic pain as a major public health problem, the epidemiology of pain in older people, pharmacoepidemiology using linked datasets, and the global burden of pain conditions.

Fiona is a Council member for the International Association for the Study of Pain, and Section Editor for Topical Reviews for the leading journal *PAIN*. She was awarded a Member (AM) of the Order of Australia for significant service to medical research and education in the field of public health, pain management and ageing, and to health policy reform in 2018.

PROFESSOR MICHAEL KEANE
BS MIT, MA PhD Brown, FES, FASSA
CHIEF INVESTIGATOR

Michael Keane is an Australian Laureate Fellow and Professor of Economics in the UNSW Business School.

Several independent sources have placed Michael Keane among the top economists internationally in terms of citations and the impact of his work. In 2013 he was ranked as top economist in the 1990 PhD cohort by Research Papers in Economics (RePEc). He is considered to be a world leader in choice modelling and his expertise is sought both nationally and internationally. In 2009 he prepared a report on tax transfers and labour supply for the Australian Treasury's Commission on Australia's Future Tax System. He has been a visiting scholar at the International Monetary Fund at various times throughout his career.

He was elected a Fellow of the Econometric Society in 2005 and in 2018 was elected to the Econometric Society Council. He won the Kenneth Arrow Award in 2008, was named an Australian Federation Fellow in 2005 and was awarded an Australian Laureate Fellowship in 2011. He is an Associate Editor of the *Journal of Econometrics and Quantitative Marketing and Economics*.

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CENTRE PERSONNEL

CHIEF INVESTIGATORS

PROFESSOR PETER MCDONALD AM
BCom UNSW, PhD ANU, FASSA
**CHIEF INVESTIGATOR AND
UNIVERSITY OF MELBOURNE NODE LEADER**

Peter McDonald is Professor of Demography within the Centre for Health Policy at the University of Melbourne.

He was President of the International Union for the Scientific Study of Population for the years, 2010-2013. In 2015, he received the Irene B. Taueber Award from the Population Association of America which recognises an unusually original or important contribution to the scientific study of population. He is frequently consulted on the issue of population futures (causes, consequences and policies) by governments around the world, especially in Australia, Europe and East Asia.

In 2008, he was appointed as a Member of the Order of Australia. He is an inaugural ANU Public Policy Fellow and in 2014 was a member of the Independent Review into Integrity in the Subclass 457 Programme. He has worked previously at the Australian National University, the Australian Institute of Family Studies, the World Fertility Survey and the University of Indonesia.

PROFESSOR WARWICK J. MCKIBBIN AO
BCom (Hons) UNSW, AM
PhD Harvard University, FASSA
**CHIEF INVESTIGATOR AND
DIRECTOR OF POLICY ENGAGEMENT**

Professor Warwick J. McKibbin, is a Distinguished Professor of Economics and Public Policy and Director of the Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy at the Australian National University (ANU). Professor McKibbin is a Distinguished Public Policy Fellow of the Economic Society of Australia; a Distinguished Fellow of the Asia and Pacific Policy Society; a Fellow of the Centre for Economic Policy Research (London) and a non-resident Senior Fellow at the Brookings Institution in Washington D.C.

Professor McKibbin is internationally renowned for his contributions to global economic modeling and the theory of monetary policy. He has published more than 240 peer reviewed academic papers and 6 books as well as being a regular commentator in the popular press. He served on the Board of the Reserve Bank of Australia from 2001 to 2011 and worked at the Reserve Bank from 1975 to 1991.

He regularly advises international institutions, Central Banks, governments, and corporations across a range of developed and emerging economies.

PROFESSOR SHARON K. PARKER
BSc (Hons) UWA, PhD Sheffield, FASSA
CHIEF INVESTIGATOR, CURTIN UNIVERSITY NODE LEADER AND DIRECTOR OF MENTORING (MID-CAREER RESEARCHERS)

Sharon K. Parker is an ARC Laureate Fellow, John Curtin Distinguished Professor, and the Director of the Centre for Transformative Work Design at Curtin University.

Sharon's research focuses particularly on job and work design. She has attracted competitive research funding worth over $40,000,000, has published over 150 academic articles, and is the author of a SAGE book on work design and a Routledge book on proactive behaviour. Sharon is a recipient of the ARC's Kathleen Fitzpatrick Award and the Academy of Management OB Division Mentoring Award and is a Fellow of the Society for Industrial and Organisational Psychology. In 2019, she was identified as a Clarivate Highly Cited Researcher in the field of Business and Economics. She helped to develop the Good Work Design principles being used by Safe Work Australia and Comcare to foster the improved quality of work within Australian organisations and is a co-founder of the Thrive at Work Initiative.

Sharon is a past Associate Editor for the *Academy of Management Annals* and the *Journal of Applied Psychology,* and has served on numerous editorial boards.

PROFESSOR MICHAEL SHERRIS
BA Macq., MBA Syd., FIA, FIAA, FSA
**CHIEF INVESTIGATOR AND DIRECTOR
OF INDUSTRY ENGAGEMENT**

Michael Sherris is Professor of Actuarial Studies, at UNSW Sydney. His research sits at the intersection of actuarial science and financial economics and has attracted international and Australian best paper awards. He has published in leading international risk and actuarial studies journals, including *Journal of Risk and Insurance, Insurance: Mathematics and Economics, ASTIN Bulletin, Journal of Economic Dynamics and Control, North American Actuarial Journal* and *Geneva Papers on Risk and Insurance*. He is on the editorial board of the Annals of Actuarial Science and Asia Pacific Journal of Risk and Insurance, is a co-editor of the *North American Actuarial Journal* and is an Editor-in-Chief of the *Springer Actuarial Series*.

He has been an active member of the Australian actuarial profession having served on the Council of the Institute of Actuaries of Australia. He was President (2008-2009) of the Asia Pacific Risk and Insurance Association. He is a past Chair of the AFIR-ERM Section of the International Actuarial Association. He was named Australian Actuary of the Year 2007 in recognition of his contributions to actuarial research and education.

SCIENTIA PROFESSOR ALAN WOODLAND
BA PhD UNE, FASSA, FES
CHIEF INVESTIGATOR

Alan Woodland is Scientia Professor of Economics in the School of Economics within the UNSW Business School.

Alan's primary research interests and publications are in the areas of international trade theory, applied econometrics and population ageing. He has published in leading journals including *Econometrica, Review of Economic Studies, Journal of Econometrics, Journal of International Economics, European Economic Review* and the *Journal of Economic Dynamics and Control*.

He is an elected Fellow of the Econometric Society and the recipient of the Distinguished Economist Award of the Economics Society of Australia. He is an Associate Editor of the *Review of International Economics*, a past editor of the *Economic Record*, and is currently on the editorial boards of the *International Journal of Economic Theory* and the *Economic Record*. Alan has been a Reserve Bank of Australia Fellow in Economic Policy and a Senior Fulbright Fellow. He is also on the scientific boards of the European Trade Study Group (ETSG), Asia Pacific Trade Seminars (APTS), Australasian Trade Workshop (ATW) and the Dynamics, Economic Growth, and International Trade (DEGIT) Research Centre.

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HONORARY PROFESSORS

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AUSTRIAN ACADEMY OF SCIENCES

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[1] Not all Associate Investigators were actively
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VALE DR IWU UTOMO

Dr Iwu Dwisetyani Utomo, Fellow in the School of Demography at the Australian National University and a long-time CEPAR Associate Investigator, passed away on 12 May 2021 after a battle with leukaemia.

Iwu had a bachelors degree in psychology from the University of Indonesia, Masters from Florida State University and a PhD in demography from ANU. Her early career research focussed mainly on reproductive health issues in Indonesia in which area she was prominent in policy setting for many years. More recently, with CEPAR CI, Peter McDonald, she conducted a longitudinal panel survey of the lives of young adults in Greater Jakarta and a field study of the lives of older people living in ten Indonesian villages spread across the country. Both these projects included quantitative and qualitative interviews with respondents and with policy makers at all levels of government. She coordinated a series of Policy Briefing Papers from these projects and these were presented in Jakarta to senior policy makers through seminars organised by the Indonesian National Planning Board. Both studies have been used extensively by graduate students at ANU, including three CEPAR-affiliated PhD students working on the ageing survey. In an innovative approach to academic research, Iwu produced films related to both of these studies which powerfully convey the difficulties often faced by people in Australia's near neighbour.

Her outstanding contributions to academia were recognised by the ANU in naming her an Outstanding ANU Woman in 2010 and an ANU Inspiring Woman in 2012. She was dedicated to her many graduate students and was chosen as ANU Supervisor of the Month in October 2020. Iwu has three children and three grandchildren. Her daughter, Dr Ariane Utomo, worked for a time as a Research Fellow in CEPAR I and is now a lecturer in geography at the University of Melbourne.

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FIRST STATE SUPER

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Yawei Wang
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Alex Xiao
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Shally Zhou
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AND
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SECTION 2

RESEARCH & RESEARCH TRAINING

CEPAR RESEARCH FELLOWS DR JANE CHONG AND DR DANIELA ANDREI SPEAKING AT THE POLICY DIALOGUE ON MATURE WORKERS IN ORGANISATIONS, HELD AT ANU IN CANBERRA IN JUNE 2021.

RESEARCH STREAM 1

MACRO-DEMOGRAPHIC DYNAMICS AND POPULATION AGEING POLICY

STREAM LEADER / PETER MCDONALD

This stream brings together a multidisciplinary team comprising expertise in demography, economics and actuarial studies to develop a suite of models that will combine to place Australia at the forefront of macro-demographic modelling globally. Together they will generate greatly improved understanding of (i) the evolution of Australia's demography, (ii) the optimal policy settings required to support an ageing demographic, (iii) demographic changes in the region and its impact on Australia, and iv) how transfers between generations will change as populations age.

The stream comprises four projects:

1.1   DEMOGRAPHIC PROJECTION MODELS

1.2   DEMOGRAPHIC CHANGE AND OPTIMAL POLICY

1.3   REGIONAL MACRO MODELLING

1.4   THE NATIONAL TRANSFER ACCOUNTS (NTA)

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1.1 DEMOGRAPHIC PROJECTION MODELS

RESEARCHERS

PETER MCDONALD
JEROMEY TEMPLE
TOM WILSON
IRINA GROSSMAN
MEIMANAT HOSSEINI-CHAVOSHI
COLLIN PAYNE
HEATHER BOOTH

While population ageing is inevitable in Australia, the speed and extent of future population ageing depend upon the course of three demographic parameters: fertility, mortality and international migration. Moreover, the existing age-sex structure of sub population groups is an important factor influencing future levels of structural and numerical ageing. Below the national level, population ageing is also affected by internal migration movements. Conventionally, country areas are much older than the metropolitan areas yet services for the aged tend to be concentrated in the cities. Accordingly, monitoring and projection of these demographic trends is a vital CEPAR activity. During 2021, project staff have had frequent interchanges with government agencies on the directions of demographic trends.

Projections

During 2021, the group completed several projections of the Australian population including projections of the Australian Indigenous population by region, the Australian population by country of birth, projections of small area populations, sexual minority populations, projections to assess the impact of COVID-19 on population ageing, and projections of the incidence of dementia, as well as new estimates of the oldest-old population of Australia. These data are publicly accessible through the CEPAR Population Ageing Futures Data Archive: www.cepar.edu.au/cepar-population-ageing-projections. During 2021, the team published a book, *The Changing Migrant Composition of Australia's Population: Past Present and Future* (Springer) and five journal articles on the methods and results of these projections.

Fertility

Australia's fertility rate fell to its lowest level ever in 2019-20 prior to the impact of COVID-19. This is associated with the postponement of first births to even older ages, a trend that has been continuing for the past 45 years. This trend will lead to a lower level of fertility for Australia in the longer term thus increasing the future level of population ageing. While fertility is falling, the number of births has risen or remained stable across recent years. This occurred because immigration has a very large impact on the number of births occurring in Australia not because immigrants have higher fertility rates but because immigrants substantially increase the population in the childbearing ages.

International Migration

For 20 years, the Australian Government has sought to reduce the level of future population ageing through its immigration program. Immigration lowers population ageing because the immigrants themselves are young compared with the general population but, also, because immigrants have their children and their grandchildren before they themselves grow old. During 2021, as a result of COVID-19, Australia experienced an unprecedentedly large net outward flow of population. Project staff provided ideas on how the Government's Migration Program could be sustained through 2021-22 and how it might be stimulated in future years. The team also jointly published a special issue of the *Journal of Population Research* on COVID-19 and its demographic impacts.

DR MEIMANAT HOSSEINI-CHAVOSHI

BS (Public Health) Isfahan University of Medical Sciences,
MA Population Studies
PhD Demography ANU

RESEARCH FELLOW

Meimanat Hosseini-Chavoshi is a CEPAR Research Fellow in the School of Population and Global Health at the University of Melbourne mentored by Professor Peter McDonald. Prior to this, she worked at ANU's Crawford School of Public Policy and School of Demography (formerly the Australian Demographic and Social Research Institute) where she carried out her postdoctoral research on fertility regulation and abortion in Iran.

Before moving to Australia, she had a longstanding career with the Iran Ministry of Health and Medical Education as Head of the Population and Health Data Unit responsible for design, implementation and data analysis of several national surveys in the areas of reproductive health, fertility, adolescence and ageing. Over the past 10 years, she has collaborated in different research projects funded by agencies such as the Wellcome Trust, WHO, UNFPA, GDN and GERPA and the Australian Research Council.

Meimanat is currently working on demographic perspectives of ageing in Australia exploring spatial patterns of older Australians, and factors associated with their living arrangements and health conditions.

Internal Migration

CEPAR Principal Research Fellow Tom Wilson and Associate Investigator Irina Grossman examined the impact of COVID-19 lockdowns and restrictions on internal migration in Australia using a new ABS dataset on interregional migration. Nationally, there was slightly increased migration from capital cities to regional areas, and at the same time, lower migration from the regions to the capitals. Melbourne, unsurprisingly, experienced the greatest increase in out-migration in 2020-21. In association with colleagues at the University of Queensland, we also modelled how COVID-19 has affected internal and overseas migration trends and the future populations of Australia's States and Territories.

Mortality

Dr Collin Payne, CEPAR Associate Investigator based at the Australian National University continued his four-year project to investigate trends, determinants, and inequalities in healthy longevity in Australia. The anticipated benefit is to improve healthy longevity among older Australians and reduce health inequalities.

During 2021, the team published a book, The Changing Migrant Composition of Australia's Population: Past Present and Future (Springer) and five journal articles on the methods and results of these projections.
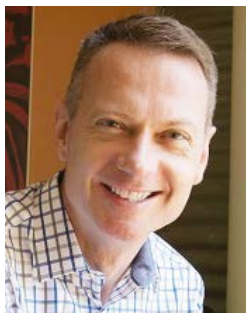
DR TOM WILSON
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Tom Wilson is a CEPAR Principal Research Fellow in the Demography and Ageing Unit at the University of Melbourne.

He is an applied demographer specialising in population and household projections, migration analysis, the indirect estimation of demographic data, Indigenous demography, very elderly demographic trends, migration analysis, subnational demographic change, and LGBT demography.

He obtained his PhD from the University of Leeds in 2001 for his work on multi-regional population projection methods. He is the founder and Editor of the open-access journal *Australian Population Studies.*

In addition to academic research, Tom regularly works with government and has created population and household projection software for several state and territory government departments.

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SEBASTIAN WENDE
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This research project broadly aims to investigate the effects of government economic policy on the macroeconomic, distributional and welfare outcomes in an economy, especially one experiencing population ageing. Government policy – particularly income taxation, age pension and retirement policies – often responds to population ageing and, in turn affects the whole economy. Objectives of this project include theoretical and quantitative analyses of the effects of government policy changes on households and the economy, and of the construction of optimal policy responses to ageing.

During 2021, there has been substantial progress on various aspects of the research project, some of which is outlined below.

Firstly, several research projects for which discussion papers were reported in previous reports have now been published. Research by Senior Research Fellow George Kudrna, AI Chung Tran and CI Alan Woodland on the role of the means-testing of the Australian age pension in providing two automatic mechanisms that enhance the sustainability of the fiscal cost of the age pension in the face of population aging, while also enhancing household distributional equity and progressivity, was published in a highly ranked international journal. An important aspect of the additional research undertaken during 2021 prior to publication was the construction of an overlapping generations (OLG) model for the United States and the demonstration that the above-mentioned mechanisms for means-testing also applied to contexts involving different age pension programs such as the United States.

Another project that furthered research was that by Associate Professor Chung Tran and his co-author Sebastian Wende on capital income taxation incidence in a dynamic model with heterogeneous firms and households. The resulting paper has now been published in an international journal.

Secondly, PhD student Daniel Wheadon's research on the nature and implications of self-control preferences of households progressed, leading to two draft chapters for his PhD thesis. In the first project, he calibrated an OLG model to the Australian economy and undertook extensive simulations to determine the effect of different degrees of self-control preferences upon life-cycle decisions regarding saving, consumption, and work hours and upon optimal means-test rules for the age pension. The simulations show that households' life-cycle decisions are strongly affected by self-control (temptation) preferences compared to households with no myopic temptation issues. He also found that the greater the degree of temptation, the stronger is the case for a lower taper rate for the means-test of the age pension, with a universal pension being optimal when self-control temptation is very strong. Daniel will be submitting his PhD in 2022.

The second project develops the investigation of the implications of self-control preferences further by formulating a small-scale (three-period

DR GEORGE KUDRNA

MA Econ TUL Czech Republic,
PhD Econ Syd.

SENIOR RESEARCH FELLOW

George Kudrna is a CEPAR Senior Research Fellow, located in the UNSW Business School. He completed his undergraduate studies in economics and insurance management in the Czech Republic and received a PhD in Economics from the University of Sydney in 2009.

His research encompasses the areas of public economics, macroeconomics and population ageing. He develops and applies rigorous macroeconomic models to investigate the economic impacts of demographic change and retirement income policy reforms – with the ultimate aim of informing and influencing major policy decisions in this area. He has published in both national and international economics journals, with recent publications including the *European Economic Review, Macroeconomic Dynamics* and *Economic Record*. He has also co-authored several government reports on pension and tax related issues, including commissioned reports for the Australian Treasury, for the US Social Security Administration and for the NSW Treasury.

George currently leads an ARC linkage grant on 'Modeling Policy for Ageing in Emerging Economies: Indonesia and beyond' with the World Bank and Bappenas as partner organisations. He is also affiliated with the Global Labour Organization (GLO) as a Fellow, the Centre for Applied Macroeconomic Analysis (CAMA) as a Research Associate, and UNSW Ageing Futures Institute as an Investigator.

of life) model to determine analytically and numerically how such preferences affect life-cycle decisions and intertemporal welfare when the government mandates a saving program for retirement. Here, the government mandates that a proportion of earnings must be contributed to a retirement savings plan (superannuation) that can only be accessed in retirement. A probability distribution over the population of a self-control parameter indicating the degree of temptation is specified for the household sector. Households with strong self-control temptation save little without the mandate while working and so suffer low utility in retirement; in the absence of an age pension, the mandate ensures that such households have greater retirement resources. Thus, the mandate forcibly reduces the opportunity for succumbing to temptation resulting in greater intertemporal welfare for those with self-control preferences. Amongst many other research questions, the optimal level of the mandated contribution rate is investigated; its value depends upon the distribution of the temptation parameter over the population.

… the optimal level of the mandated contribution rate is investigated; its value depends upon the distribution of the temptation parameter over the population.

DR MIGUEL OLIVO-VILLABRILLE

BA Pontificia Universidad Catolica Madre y Maestra, MA Mathematics Instituto Tecnologico de Santo Domingo, MA Economics New York University, PhD Economics University of Calgary

RESEARCH FELLOW

Miguel Olivo-Villabrille is a CEPAR Research Fellow at UNSW Sydney. He is also a Research Affiliate at the Tax and Transfer Policy Institute at ANU's Crawford School of Public Policy.

Miguel's interests lie in labour economics, particularly in family and demographic economics. He employs dynamic structural methods to model decision making over the life cycle to propose and evaluate policies. Those methods can be applied to study educational choices, labour supply and retirement decisions, savings and asset accumulation, and also divorce. He is interested in studying how changes in marriage formation can lead to more macro outcomes like household income inequality and the structure of wages. In addition, he is interested in tax policies, evaluating the effect they have on labour supply and tax-evading behaviour at higher levels of income.

RESEARCHERS

WARWICK MCKIBBIN
LARRY LIU
JONG-WHA LEE
PHITAWAT POONPOLKUL
TSENDSUREN BATSUURI
AUGUSTUS PANTON
ROSHEN FERNANDO

Extending the G-cubed multi-country model

The goal of the main project, involving a team comprising CI Warwick McKibbin and Research Fellow Larry Liu and 3 PhD students, is to extend the G-Cubed multi-country model to explore different demographic scenarios for Asian economies with a focus on the macroeconomic adjustment globally, in the region and in Australia.

During 2021 the ANU team has successfully updated the global database and constructed the core model with countries including United States, Japan, Europe, Australia, Korea, Rest of Advanced Economies, China, India, Indonesia, Philippines, Vietnam, Thailand, Malaysia, Other Asia, Latin America, Africa, Middle East and North Africa, and the Rest of the World. They have also introduced annual cohorts into all countries and modelled several demographic scenarios.

During 2021 they successfully incorporated the demographics structures within this model to enable us to develop the core model further using the Blanchard/Yaari approximation to an overlapping generations (OLG) model. With the demographic model in place they were able to successfully generate a baseline projection of the model from 2015 to 2100, taking into account the annual changes in demographic features across countries and over time.

During 2022 they plan to continue to further explore this version of the model using different demographic scenarios and incorporating individual country age earnings profiles using the National Transfer Accounts. They also propose to implement four types of cohorts into the model: children, young workers, older workers, and retirees. The approach to be followed builds on the Gertler (1999) approach.

Dr Larry Liu also has a number of new papers under way which are planned to be finalised in 2022. They include a survey of the macroeconomics of global demographic change and several papers on demographic change and international capital flows. In 2021, Dr Liu produced a working paper called, 'Global

Demographic Change and International Capital Flows: Theory and Empirics' (CEPAR Working Paper 2021/28 and CAMA Working Paper 70/2021).

The impact of demographic change in Asia on macroeconomic and environmental outcomes

PhD student Tsendsuren (Tsegi) Batsuuri is focused on several research questions: (1) How does demographic change and population ageing affect carbon emissions when capital intensity and emissions intensity across sectors are different? (2) How does asymmetric demographic change across countries affect global and country emissions when countries are linked through trade and finance? (3) How does the interaction of different pension schemes with different demographic transition affect global emissions? (4) Can price based metrics be useful in comparing country efforts when there are spill-over impacts due to demographic change? This year Tsegi has completed a literature review, given a seminar on her research proposal and has formulated a small model to explore the research

DR LARRY LIU
BS MA Shanghai Jiao Tong, PhD ANU
RESEARCH FELLOW

Larry Liu is a CEPAR Research Fellow at the Crawford School of Public Policy at ANU. He is also a Fellow at the Centre for Applied Macroeconomic Analysis (CAMA) at ANU. He joined CEPAR in 2018 after working as a Research Fellow at CAMA since 2015. He completed his PhD in Economics at ANU and received both his MA in Economics and BS in Computer Science from Shanghai Jiao Tong University in China.

His current research focuses on the macroeconomic effects of demographic change in life cycle models. More specifically, he examines demographic effects on consumption and savings,

economic growth, structure change and financial markets in closed-economy models, and also on international trade, capital flows and current account balances in open-economy models.

questions. She has drafts of her first two papers. During 2022 the OLG model will be developed to further explore the research questions.

The link between demographic change, risk and the impact of monetary policy

PhD student Phitawat Poonpolkul completed his PhD in 2021. His thesis looks at the link between demographic change, risk and the impact of monetary policy.

Demographic change and infectious diseases

Together with PhD student Roshen Fernando, the ANU team have incorporated COVID-19 into the demographic model and published several widely cited papers. In 2022 they plan to extend this research to explore the links between Anti-Microbial Resistance (AMR), Ageing and global economic growth.

> Together with PhD student Roshen Fernando, the ANU team have incorporated COVID-19 into the demographic model and published several widely cited papers.

PROFESSOR JONG-WHA LEE
BA MA Korea,
MA PhD Harvard
ASSOCIATE INVESTIGATOR

Jong-Wha Lee is currently Dean of the College of Political Science and Economics, and Dean of the Graduate School of Policy Studies at Korea University. He served as a senior adviser for international economic affairs to the former President of the Republic of Korea. He was also previously Chief Economist and Head of the Office of Regional Economic Integration at the Asian Development Bank and an economist at the International Monetary Fund. He has taught at Harvard University, Columbia University, and Peking University.

He has published extensively on topics relating to human capital, growth, financial crises, and economic integration in leading academic journals. His most recent books include *Crisis and Recovery: Learning from the Asian Experience* (World Scientific, 2016) and *Education Matters: Global Schooling Gains from the 19th to the 21st Century,* co-authored with R. J. Barro (Oxford University Press, 2015). He is a regular columnist for Project Syndicate and Korea JoongAng Daily. He obtained his PhD and Master's degree in Economics from Harvard University.

RESEARCHERS
PETER MCDONALD
JEROMEY TEMPLE
JAMES MAHMUD RICE

The CEPAR National Transfer Accounts (NTA) team has produced and analysed six NTA accounts for Australia dating from 1980 to 2010 in five-year intervals. The account for 2015-16 was nearing completion at the end of 2021. National Transfer Accounts, now estimated for over 90 countries, are designed to provide a unified view of population ageing and the economy in a way that is comparable across countries. The accounts measure age-specific labour income, asset income, consumption, transfers and saving, accounting for flows within households, between households, through the public sector and with the rest of the world (United Nations Department of Economic and Social Affairs 2013: National Transfer Accounts manual: Measuring and analysing the generational economy.) The Australian NTA accounts for 2002-04, 2009-10 and 2015-16 also include generational wealth accounts that provide detailed information of levels of wealth and debt for individuals by age.

The major work in this project during 2021 has been conducted through the PhD research of James Mahmud Rice. This has included publication of a paper that examines intergenerational inequality – in particular, intergenerational inequality in income. The analyses presented suggest that there are substantial inequalities in the incomes received by different generations, with earlier generations generally receiving less income in real terms over their lifetimes than later generations. As the state has operated through time – receiving public transfers from some individuals and paying public transfers to others – it has worked to decrease the incomes of earlier generations relative to those of later generations. In this way, the state could be described as exhibiting a bias in favour of later generations. Another paper 'Financial Sustainability, Intergenerational Inequality, and Demographic and Economic Change in the Australian Generational Economy' has been accepted for publication subject to revisions. This paper links the NTA with the work of Project 1.1 by projecting financial sustainability and intergenerational inequality in Australia.

The group also edited a special feature on National Transfer Accounts that was published by the *Journal of Population Research*.

> The CEPAR National Transfer Accounts (NTA) team has produced and analysed six NTA accounts for Australia dating from 1980 to 2010 in five-year intervals.

**A/PROFESSOR
JEROMEY TEMPLE**
BA Population Studies
(Hons) BCom PhD
Demography ANU
**ASSOCIATE PROFESSOR OF
ECONOMIC DEMOGRAPHY**

Associate Professor Jeromey Temple is Head of the Demography and Ageing Unit at the University of Melbourne and Associate Professor of Economic Demography with CEPAR.

Temple is the head of the Australian National Transfer Accounts (NTA) project and in 2018 was elected as the Asia Regional representative on the global NTA Executive Council led from the University of California at Berkeley and the East West Centre. Temple's current work on the National Transfer Accounts seeks to improve our understanding of how changes in population age structure are affecting economic growth, the wellbeing of all age

groups, and the sustainability of public and private systems that transfer resources between generations. Temple's further research focus includes quantitative studies of heterogeneity in population and individual ageing.

FEATURED ASSOCIATE INVESTIGATORS

OTHER ASSOCIATE INVESTIGATORS INVOLVED IN STREAM 1 RESEARCH IN 2021 INCLUDED:

DR IRINA GROSSMAN

BSc and BEng (Hons) Monash, PhD Monash

Irina Grossman is a Postdoctoral Research Fellow in the Demography and Ageing Unit at the University of Melbourne and an Associate Investigator with CEPAR working on project 1.1.

She is an applied demographer specialising in macro-demographic dynamics, small area demography, and in the development and evaluation of forecasting models.

She obtained her PhD from Monash University in 2017 for her work in language processing and cognition and has a background in electrical and computer systems engineering.

Her current work focuses on the integration of traditional demographic approaches with novel machine learning methods to improve the accuracy of small area population forecasts.

DR COLLIN PAYNE

BA Wisconsin, MA PhD Pennsylvania

Collin Payne is an ARC DECRA Fellow and Senior Lecturer in the School of Demography at The Australian National University. He joined CEPAR in 2019 where he collaborates with the Demographic Projection Models project team.

He completed his PhD in Demography at the University of Pennsylvania in 2015, and from 2015-2017 he was a postdoctoral fellow at the Center for Population and Development Studies at Harvard University. Payne's research focuses on two areas: exploring the dynamic relationships between lifespan and healthspan among older adults, and developing and advancing demographic methodologies to estimate population health.

Recently, his focus has centred on developing new methodological techniques for exploring cohort patterns of health and longevity. Much of his research focuses on population ageing in low- and middle-income countries, including Eastern and South-Eastern Asia. His research is published in various journals across demography, epidemiology, and public health, including *Demography, Population and Development Studies, PLoS Medicine, BMC Medicine,* and the *International Journal of Epidemiology.*

ASSOCIATE PROFESSOR CHUNG TRAN

Chung Tran is Associate Professor of Economics at the Australian National University and a CEPAR Associate Investigator.

His primary research interests lie in the areas of macroeconomics and public finance. Specific research topics include: evaluating trade-offs in designing social security and health insurance systems; analysing the dynamic effects of fiscal policy; and understanding the consequences of debt financing and fiscal austerity measures. His work appears in leading academic journals including *Review of Economic Dynamics,* the *Journal of Economic Dynamics and Control,* the *European Economic Review* and the *Journal of Development Economics.*

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RESEARCH STREAM 2

DECISION MAKING, EXPECTATIONS AND COGNITIVE AGEING

CO STREAM LEADER / KAARIN ANSTEY

This stream brings together for the first time the disparate areas of behavioural economics, neuroscience, and developmental and health psychology, to unify our understanding of life course choices and to transform policy perspectives.

By undertaking research which aims to fully capture the psychological and social factors that influence choice over the life course it seeks to enhance the wellbeing of people in old age. These include decisions about: (i) savings, retirement, home ownership, insurance, (ii) planning for the future in terms of active ageing and aged care, and (iii) choices about health behaviour and management of chronic conditions.

CO STREAM LEADER / MICHAEL KEANE

It will:

- develop a comprehensive model of ageing and decision making including identification of typologies of decision makers;

- develop multidisciplinary paradigms and predictive models of decision making and ageing;

- develop and evaluate interventions to increase positive expectations about ageing; and

- develop life cycle models that incorporate investments in health and housing as well as cognitive limitations in ageing.

The stream comprises four projects:

2.1 INDIVIDUAL DIFFERENCES IN FINANCIAL AND HEALTH DECISION MAKING: IMPACTS ON PRODUCTIVE AGEING

2.2 IDENTIFYING INDIVIDUAL AND SOCIAL INFLUENCES ON DECISION MAKING AT OLDER AGES

2.3 EXPECTATIONS AND THE AGEING EXPERIENCE

2.4 RATIONAL CHOICE THEORY AND CONSUMERS

2.1 INDIVIDUAL DIFFERENCES IN FINANCIAL AND HEALTH DECISION MAKING: IMPACTS ON PRODUCTIVE AGEING

RESEARCHERS

KAARIN ANSTEY
CRAIG SINCLAIR
BROOKE BRADY
RUTH PETERS
KIM KIELY
MOYRA MORTBY
SOPHIE ANDREWS
SCHERAZAD KOOTAR
LIDAN ZHENG
RANMALEE ERAMUDUGOLLA
NICOLE EE
YUCHEN XIE

External collaborators

RICHARD ARTHUR (ANU)

MALINEE NEELAMEGAM
(THE UNIVERSITY OF NORTH TEXAS)

In 2021 the research team continued with data collection for their main project - the 20-year follow up of the Personality and Total Health (PATH) Through Life study cohorts and finished data collection in July 2021. 1010 participants consented to the study with 981 completing the survey. Similar to 2020, the program of work was impacted by COVID-19 lock-downs and the team had to change the original methodology from in-person assessments to a telephone assessment. An advantage of this was that interviewers could be employed from a range of locations and also all participants had similar contact regardless of their location. However, assessments of cognitive and sensory function were unable to be conducted except for a brief telephone cognitive screen. In addition, for 908 participants in the study, the team also interviewed a person who could provide additional information about the participant's health and cognitive function. In order to align with international studies, a version of the COVID-19 questionnaire from the US Multi-ethnic Atherosclerosis study was included which is also being used in a large international collaboration in partnership with the World Health Organisation and the US Alzheimer's Association. The study was also enhanced by the addition of a novel mailout questionnaire on decision making that addressed contemporary Australian topics related to aged-care and finances. These data are currently being prepared.

The value of the PATH study for wider government research and policy was evidenced this year in a collaboration with the Australian Institute of Health and Welfare who are using the study to assist in validating their Dementia Dataset. This important project involves creating estimates of dementia prevalence through data linkage health and care administrative datasets and the PATH study diagnostic data will be used in the validation process. In addition, the team is working with the ACT Government to use the PATH study data to inform their policies on healthy ageing and mental health. This builds on earlier work the team did to provide consultancy on wellbeing for the ACT Chief Minister' Office.

Factors that impact on cognitive decline continued to be investigated through analysis of the PATH through Life datasets, systematic reviews and other datasets. AI Dr Scherazad Kootar, Dr Richard Arthur, and colleagues evaluated the link between anxiety and risk of cognitive decline. Although prior studies report an association, we found that once depression was taken into account there was no effect of anxiety on subsequent cognitive decline.

DR BROOKE BRADY
BPsych (Hons)
Western Syd,
PhD (Psych) Western Syd.
ASSOCIATE INVESTIGATOR

Brooke is a CEPAR Associate Investigator and early career research scientist who applies her expertise in evidence-based research and practice to ensuring that diverse voices are represented in authentic and empowered ways. Brooke has research expertise spanning life-course cognitive ageing, LGBT+ health and wellbeing, gender equity, ageing and ageism, dementia prevention and workplace diversity and inclusion.

Brooke has been working as a postdoctoral research fellow at UNSW and Neuroscience Research Australia for 3 years under the mentorship of Laureate Professor Kaarin Anstey. She currently works with innovative research methods and practices, including co-managing large scale projects that make use of integrated wearable technologies and new-wave app-based experience sampling methods to explore intra-individual variability in self-perceptions of age and gender. She also collaborates with CEPAR members on projects exploring shared decision making in Australia and Denmark.

Brooke is a member of the CEPAR equity, diversity and inclusion committee. She also serves as a panel member of the UNSW Human Research Ethics Committee for the Behavioural Sciences.

In contrast our analyses did find that opioid exposure was associated with increased cognitive decline. Dr Malinee Neelamegam led work in collaboration with CI Professor Kaarin Anstey that linked the PATH dataset to the Pharmaceutical Benefits Scheme to estimate participants' exposure to morphine and found that cumulative exposure was associated with poorer general cognition scores. AI Dr Ruth Peters continued important work on air pollution and cognitive function, contextualising this in relation to chronic disease more generally. In addition, Peters led a meta-analysis on high cholesterol to clarify its role as a risk factor for cognitive decline.

The value of the PATH study for wider government research and policy was evidenced this year in a collaboration with the Australian Institute of Health and Welfare who are using the study to assist in validating their Dementia Dataset.

DR SCHERAZAD KOOTAR
BSc Mumbai, MSc Mumbai,
PhD Nice-Sophia Antipolis
POSTDOCTORAL FELLOW

Scherazad Kootar is a CEPAR Associate Investigator working as a Postdoctoral Fellow in Professor Kaarin Anstey's group at NeuRA/UNSW.

Her primary research focuses on dementia prevention, risk and protective factors for dementia and development of dementia risk tools using population-based studies. One of her recent studies involved investigating the link between anxiety and risk of cognitive decline.

Scherazad obtained her PhD from the University of Nice-Sophia Antipolis, France in 2017, for her work on stress and Alzheimer's disease using transgenic mouse models. She is keen to bring her knowledge on stress and other blood biomarkers to understand their role in cognitive decline and dementia. In 2022, she will serve as an Associate Editor for the *Journal of Alzheimer's disease*.

Scherazad is passionate about teaching and has experience in training undergraduates on cellular and molecular biology techniques.

2.2 IDENTIFYING INDIVIDUAL AND SOCIAL INFLUENCES ON DECISION MAKING AT OLDER AGES

RESEARCHERS

KAARIN ANSTEY
CRAIG SINCLAIR
BROOKE BRADY
RUTH PETERS
MYRA HAMILTON
NICOLAS CHERBUIN
KIM KIELY
MOYRA MORTBY
SOPHIE ANDREWS
LIDAN ZHENG
RANMALEE ERAMUDUGOLLA
NICOLE EE
JAMES LIAN
YUCHEN XIE

The research team was involved in several projects clarifying how physical activity impacts brain health. While decision making is often thought of as a consciously controlled process, emerging psychological research indicates the importance of unconscious processes such as habits. Habit formation has been shown to play a role in everyday decision making which underpins healthy lifestyle behaviours. CEPAR AI Dr Sophie Andrews, in collaboration with AI Dr Brooke Brady and CI Professor Kaarin Anstey led a cross-sectional study which found that in a sample of older community dwelling Australians, those who engaged in more hours of walking and incidental activities each week reported their activities to be more automatic than those who were less active, whereas hours spent in planned exercise activities was not related to habit strength. These findings suggest that the role of habit in maintaining physical activity in older people may therefore differ depending on the type of activity. In other work the team explored barriers to physical activity in different ethnic groups. Research from the PATH study from CEPAR AI Professor Nicolas Cherbuin's lab also showed that physical activity was associated with less atrophy of the hippocampus which is a brain subregion that is particularly vulnerable in Alzheimer's disease.

Research into substitute decision making was also conducted. When a person is unable to make health, lifestyle or financial decisions for themselves (e.g. due to a significant cognitive impairment) Australian laws allow for a substitute decision-maker to make decisions for the person, on their behalf. This challenging role can require a substitute decision maker to make decisions about a person's assets, admission into residential care or life sustaining treatments. However, community awareness of substitute decision making is low, and there are few resources available to provide support for people in this role. CEPAR Research Fellow Craig Sinclair collaborated with Advance Care Planning Australia on a systematic review of available online resources, and a survey of public knowledge, relating to medical substitute decision-making. Ongoing work in this area during 2022 will investigate the prevalence and experiences of financial substitute decision making among the midlife and older adult cohorts of the PATH Through Life study.

> CEPAR Research Fellow Craig Sinclair collaborated with Advance Care Planning Australia on a systematic review of available online resources, and a survey of public knowledge, relating to medical substitute decision-making.

DR CRAIG SINCLAIR
BA BSc (Hons),
PhD Psychology UWA
RESEARCH FELLOW

Craig Sinclair is a CEPAR Research Fellow based at the University of New South Wales node.

His research training is in psychology, and he works with Professor Kaarin Anstey on a range of projects relevant to decision making, cognitive ageing and expectations of ageing. Within the current policy environment, older adults are expected to actively engage in a range of high-stakes decisions relating to their finances, lifestyle, accommodation and healthcare. These decisions occur in the context of shifting personal and family priorities and responsibilities, and limited time to recover from decisions that turn out poorly. His recent research has focused on advance care planning and supported decision making, particularly in the context of cognitive ageing and dementia. This work aims to better understand the decision-support needs of older people (including those with dementia) to inform the design of decision-support interventions.

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RESEARCHERS

KAARIN ANSTEY
NATASHA GINNIVAN
CRAIG SINCLAIR
BROOKE BRADY
RUTH PETERS
KIM KIELY
MOYRA MORTBY
LIDAN ZHENG
JANET MACCORA
TOMER JOFFE
NICOLE EE
CAROL JAGGER

In this project, how age expectations influence healthy and productive ageing are investigated. Age expectations of an individual are strongly related to the broader issues of societal ageism. 2021 was a significant year in this field with the publication of two key reports – the World Health Organisation's report on Ageism and publication of the findings of the Royal Commission into Aged Care in Australia. The release of these reports draw attention to a number of issues related to systemic ageism. CEPAR Research Fellows Craig Sinclair and Natasha Ginnivan, along with CEPAR CIs Kaarin Anstey and Sharon Parker (Stream 3), have collaborated on a review of international peer-reviewed and grey literature describing interventions aimed at combatting ageism in the workplace. This review assessed methodological issues with existing research, and identified factors associated with effective interventions. The study findings will be used to inform the design of a new online intervention aimed at addressing negative attitudes towards older workers, to be trialled during 2022.

Another avenue for addressing ageism was explored by AI Associate Professor Ruth Peters, along with Professor Kaarin Anstey and PhD student Nicole Ee, who conducted a systematic review of intergenerational programs and a qualitative study, to better understand community attitudes towards intergenerational programs. Dr Peters and her team are also conducting pilot studies in this field, with the aim of establishing the evidence based for the design of and impact of intergenerational program on risk of frailty, cognitive decline, and general wellbeing for participants. Like many others, this work was also suspended during COVID-19 lockdowns.

Finally, members of the stream also conducted broader work on population ageing and social inequality. AI Dr Kim Kiely's program of research on health expectancy is evaluating whether where a person lives and their gender, impacts their expected level of disability. Dr Kiely, along with Prof Kaarin Anstey and AI Prof Carol Jagger, evaluated whether Australia is experiencing a compression of morbidity using the Household, Income and Labour Dynamics in Australia Study (HILDA). They found compression of morbidity over time for adults with high social position, but expansion of morbidity for those of lower socio-economic status. These findings may point to societal factors impacting opportunities for healthy ageing.

> The study findings will be used to inform the design of a new online intervention aimed at addressing negative attitudes towards older workers, to be trialled during 2022.

DR NATASHA GINNIVAN

BSc (Psyc) UNSW,
PG-Dip (Psyc) MQU,
PhD ANU

POSTDOCTORAL
RESEARCH FELLOW

Natasha Ginnivan is a CEPAR Research Fellow in Psychology and Ageing based at the UNSW School of Psychology.

She obtained her PhD from the Australian National University in 2018 on cross-cultural attitudes to ageing.

Natasha investigates implicit and cultural attitudes to ageing, ageism, age expectations, age stereotypes and self-perceptions of ageing. Her research includes the lived experience of ageing, dementia, and ageing in marginalised populations, including ageing prisoners. Her current research is focusing on how early life events can impact age expectations in later life, and how stereotypes can create barriers to the enhanced wellbeing of older adults. In addition, how social media, and ageist discourse impacts on self-perceptions of ageing. Natasha is actively engaged with the Australian Association of Gerontology (AAG) and is a part of the Student and Early Career Group who mentor up-and-coming ageing researchers and assists with yearly conference arrangements.

2.4 RATIONAL CHOICE THEORY AND CONSUMERS

RESEARCHERS

MICHAEL KEANE
HANMING FANG
TIMOTHY NEAL
PEYMAN FIROUZI NAEIM
MIGUEL OLIVO-VILLABRILLE
ELENA CAPATINA
FEDOR ISKHAKOV
CAROL JAGGER

The aim of this project is to develop and extend the methodologies that economists use to model the choices of older individuals. Rational Choice Theory is the prevailing framework used for formally modelling economic decisions, and it relies on a number of assumptions relating to the rationality of individual decision making. But there is good reason to believe that these assumptions are not appropriate for modelling the choice environments of older Australians, as they regularly need to make highly complex financial decisions using limited cognitive resources.

Accordingly, this project develops new choice models that incorporate cognitive limitations in decision making, as well as other deviations from rational choice behaviour. These models will be applied to help better understand observed behaviour in areas such as investments in health and financial decision making. They will allow for heterogeneity in consumer preferences and choices, and lead to new methods that can isolate heterogeneity that arises from differences in preferences to those arising from confusion or irrationality. The application of this methodology will enable more realistic policy experiments that yield better insight into the role of government policy and how it influences individual wellbeing. Indeed, when we better understand the processes by which older individuals make complex choices, it facilitates more accurate predictions of how government intervention in a complex market will affect consumer welfare.

Three research papers were published or completed in 2021. The first study developed a model of panic buying generated by the COVID-19 pandemic, a phenomenon that had a particularly severe impact on elderly consumers. Among other results, it found that Australians were the world's worst panic buyers. The second study considered the properties of IV estimation for studying causal effects in economics and related social sciences. The findings have significant implications for applied work in many branches of economics, including population ageing. The third study applied IV estimation for estimating the Frisch elasticity of labour supply, which underpins many structural models that study economic behaviour over the lifecycle. The last study explored the effects of taxes and safety net pensions on life-cycle labor supply, savings and human capital in the context of Australia.

> The application of this methodology will enable more realistic policy experiments that yield better insight into the role of government policy and how it influences individual wellbeing....

DR PEYMAN FIROUZI-NAEIM
MA Mathematics East Carolina University, PhD Georgia State University
RESEARCH FELLOW

Peyman Firouzi-Naeim is a Research Fellow at CEPAR, located in the UNSW Business School. He is a labour and health economist and his research interests lie at the intersection of two important policy issues: health and retirement. He employs and develops the computational techniques in both structural estimation and reduced-form methods of causal inference to address big-data and high-dimensional problems. This approach allows for a more comprehensive investigation of policy-relevant questions.

His current research includes the effect of raising Medicare eligibility age on the health of people near retirement in the US; consistent incorporation of individual-level characteristics into models with health outcomes measured at an aggregate level; the effect of sleep on health of elderly people; and numerical optimal tax calculation with age-dependent taxation.

Peyman holds a PhD in Economics from Georgia State University and an MA in Mathematics from East Carolina University.

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FEATURED ASSOCIATE INVESTIGATORS

OTHER ASSOCIATE INVESTIGATORS INVOLVED IN STREAM 2 RESEARCH IN 2021 INCLUDED:

DR KIM KIELY

BLib (Hons) Syd., PhD ANU

Kim Kiely is a Senior Research Fellow within the UNSW School of Psychology with a conjoint appointment at NeuRA. He currently holds an NHMRC Early Career Fellowship entitled 'Estimating and Alleviating the Impacts of Age-Related Sensory Decline'. He is the Lead Investigator on an ARC funded 'Healthy and Working Life Expectancies in an Ageing Australia' study, and the Dementia Australia funded 'Auditory Ageing and Cognitive Impairment Study (AUDACIOUS)'.

Kim's research is orientated by a contextualised perspective to human development and spans the fields of life course epidemiology, social psychiatry, and geropsychology. His interests encompass aspects of healthy and productive ageing, focusing on the social, functional and cognitive impacts of sensory ageing. Current work includes analyses of the determinants and outcomes of successful sensory aid use, and identifying mechanisms underlying sensory-related cognitive decline. He is also developing a research program investigating social determinants and inequalities in health and working life expectancies.

Kim is involved in projects 2.1, 2.2 and 2.3 of the CEPAR research program.

ASSOCIATE PROFESSOR RUTH PETERS

*BSc Reading, MSc Lond.,
PhD Imperial College London*

Associate Professor Ruth Peters is a Senior Research Scientist at Neuroscience Research Australia. Prior to moving to Australia she worked for several years at Imperial College London. As a CEPAR Associate Investigator she contributes to projects 2.1 and 2.2 of the CEPAR Research Program. Dr Peters works to develop our understanding of the risk factors which increase our risk of cognitive decline and dementia and the ways in which we might act to reduce this risk. Alongside leading teams delivering high-profile, evidence synthesis work in the area of dementia risk reduction, she has a particular interest in hypertension and in the treatment of hypertension in older adults.

She was the cognitive function lead for the award-winning multinational Hypertension in the Very Elderly Trial (HYVET, HYVET -COG) and both her work in hypertension and evidence synthesis are cited widely in the academic literature and by guidelines.

DR ELENA CAPATINA

BA Econ MA PhD University of Toronto

Elena Capatina is a Senior Lecturer in the Research School of Economics at the Australian National University and an Associate Investigator at CEPAR where she collaborates with Michael Keane on project 2.4. Her research is at the intersection of macroeconomics, labour, and health economics. Her main expertise lies in the economic modelling of individual decisions with respect to precautionary savings, labour supply and insurance decisions in the face of health risk. In particular, she has worked extensively on developing a life cycle model of health risk and earnings inequality with CEPAR Chief Investigator Michael Keane. She has published papers in the *Journal of Monetary Economics and Labour Economics.*

RESEARCH STREAM 3

ORGANISATIONS AND THE MATURE WORKFORCE

STREAM LEADER / SHARON PARKER

This stream is undertaking research to identify work designs and other organisational practices to attract and retain mature workers in organisations, thus enhancing their performance and improving growth and productivity. It is at the vanguard of new research focused on the impact of various work designs on worker wellbeing at older ages, especially cognitive capital. It investigates barriers to mature workforce participation, especially age discrimination and the accommodation of caring responsibilities, to inform workplace policy and practice.

The stream comprises four projects:

3.1   MATURE WORKERS IN ORGANISATIONS SURVEY

3.2   PROMOTING SUCCESSFUL AGEING IN THE WORKPLACE

3.3   PROMOTING SUCCESSFUL TEAMS AND ORGANISATIONS

3.4   PROMOTING EFFECTIVE CARE OUTSIDE OF WORK

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3.1 MATURE WORKERS IN ORGANISATIONS SURVEY (M-WOS)

RESEARCHERS

SHARON PARKER
MARIAN BAIRD
DANIELA ANDREI
MYRA HAMILTON
JANE CHONG
ALISON WILLIAMS
LUCINDA ILES
NATE ZETTNA
EVA ZELLMAN
LEAH ZOSZAK
ANDREEA CONSTANTIN
DANIEL DINALE
LISA GULESSERIAN
BEI LU
FABIOLA GERPOTT
PATRICK DUNLOP
MARYLÈNE GAGNÉ
JOANNE EARL
GRETCHEN (GIGI) PETERY
DONALD TRUXILLO

The goal of this stream is to conduct several longitudinal and multi-level organisational studies to investigate how to attract and retain mature workers in the workplace. To better understand how organisations can improve mature worker attraction and retention, the project team has developed the Mature Workers in Australia Survey (M-WOS) and Policy Audit instrument, as well as a range of other supporting tools and resources (such as an M-WOS survey platform, website, brochures and social media).

A key component of this project has been to secure the participation of organisations in longitudinal and intervention studies. This year, many of the industry partnerships that were established previously were developed and progressed. The stream currently has thirteen collaborating organisations actively participating in the project, with additional organisations in the contracting stage. A policy audit has been completed with eleven of the collaborating organisations. This year, further interviews have been conducted with mature workers at four of our collaborating organisations. Additionally, this year the MWOS survey was used to collect baseline data in another four collaborating organisations. The data collected from collaborating organisations has led to the

development of feedback reports and recommendations. Each organisation also receives feedback through a dashboard which dynamically displays the MWOS results.

One of the collaborating organisations has agreed to two interventions based on the evidence provided by the research team to be implemented early next year. A further two of our collaborating organisations are currently in the process of action planning and designing the interventions, with plans to move into implementation stage in 2022. Our team was also invited to present the project findings at several organisational and industry events, including the CEPAR Policy Dialogue in Canberra, the 2021 Age in the Workplace Meeting, and the Safety and Health Representative Conference organised by our collaborating organisation, LGIS – WA.

During the COVID-19 pandemic, our team saw an opportunity to investigate the impact of the pandemic on mature workers and adapted the MWOS survey to collect time lagged data to capture the experiences of employed, unemployed, and retired mature Australians. In 2021 we added two more rounds of data collection to this study which now totals four timepoints allowing for a more refined analysis of

DR ANDREEA CONSTANTIN
MSc Bucharest, MSc KU Leuven, Dr. rer. pol. Koln
RESEARCH FELLOW

Dr Andreea Constantin is a postdoctoral research fellow based at the University of Sydney node of CEPAR.

She received her PhD degree in Economics and Social Sciences from the University of Cologne, Germany. She has two master's degrees in Social Policy Analysis and Statistics and Advanced Sociological Research from the Catholic University Leuven and the University of Bucharest respectively.

Her main research interests are work-life balance policies, mature workers, outside-work care, and gender roles within and outside organisations. She

has contributed to analysing links between social policies and individual behaviour and attitudes, and to testing and developing cross-cultural comparative survey measures. Andreea's research interests also include big data, survey methodology and cross-cultural studies.

trends during the pandemic. To date, the results of this survey have been presented at the recent CEPAR Policy Dialogue in Canberra and are currently being developed into media articles and academic papers.

Two new organisational projects have been scoped to commence in early 2022. One of these will include a new collaborating organisation, a national financial advisory firm, and will also involve CEPAR Associate Investigator (AI) Dr Joanne Earl. The second one represents an extension of our work with one of our current organisational collaborators who are providing extra funding for Dr Chong to lead the design, implementation and evaluation of a new socialisation program. The new program will have elements tailored to mature workers who are new to the organisation and will involve AIs Dr Patrick Dunlop and Professor Marylène Gagné. Both research collaborations have been pre-planned and tailored to suit the particular needs of the collaborating organisations. We look forward to working with both partners next year and seeing the outcomes of their intended projects.

Throughout 2021, we also made efforts to remain engaged with the international academic community as well as our cross-stream

collaborators, especially given the reduced opportunities for travel and joint meetings. To support our main goal of conducting applied research and interventions with organisations, we invited AIs to share their expertise in conducting and publishing intervention research. Professor Donald Truxillo presented at the 2021 CEPAR Policy Dialogue and Professor Fabiola Gerpott presented at the Mature Workers in Organisations Virtual Symposium Series. The series was launched in 2021 with the aim of encouraging interaction between academic researchers from a broad range of disciplines across the various CEPAR streams and beyond, as well as from industry. Furthermore, through a multidisciplinary research project, Senior Research Fellow Bei Lu (Stream 4) and AI Dr Petery, have worked together to use the insights generated by applying the MWOS research model in the aged care sector in China to inform a progressive pension benefit design.

> One of the collaborating organisations is actively planning two interventions based on the evidence provided by the research team. A further two of our partners are designing interventions to be implemented in 2022.

PROFESSOR JOANNE EARL
BEd Flinders, BA (Hons) Macquarie University, MPsy (UNSW), PhD UNSW
ASSOCIATE INVESTIGATOR

Joanne (Jo) Earl is a CEPAR Associate Instigator, and Professor of Psychology employed at Macquarie University.

Jo is an applied researcher focusing on issues relating to ageing, older workers, retirement planning and adjustment. Her research focusses on development of new measures, longitudinal studies, intervention design and evaluation - all with community samples. She is the recipient of an ARC Discovery and ARC Linkage project. Previous measures developed with her team and an online training program are hosted by National Seniors

Australia. Her most recent ARC Linkage (supported by Allianz Retire+) focuses on promoting a holistic model of retirement planning combining career, health and financial advice.

In addition to her academic research, Jo teaches postgraduate psychology courses in psychological assessment, applied research, training design and evaluation. She is a member of the NSW Ministry Advisory Council on Ageing, as appointed by the Minister for Ageing.

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RESEARCHERS

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NATE ZETTNA
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GAOYUN (SOPHIE) YAN
ROSS ANDEL
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HANNES ZACHER

External collaborator

SERENA WEE
(UNIVERSITY OF WESTERN AUSTRALIA)

Successful ageing is a concept that has captured the attention of researchers and practitioners alike. Indeed, some individuals age more positively than others, such that they are able to maintain or improve their physical wellbeing over time, experience a lower probability of disease, and maintain physical and cognitive functioning until older ages compared to the average population. In this project, we focus on how work factors (as well as demographic, family, and personality variables) affect such 'successful ageing'.

In 2021, we continued our investigations on work factors that contribute to successful ageing. Using the MWOS-Benchmark data, Research Fellow Jane Chong, alongside Senior Research Fellow Daniela Andrei and Lead CI Professor Sharon Parker investigated the moderating effect of age on the relationship between idiosyncratic deals and employees' work design. The manuscript is currently under review and provides practical insights into how, with support from their organisation, mature workers can proactively shape their work design according to changing needs and motivations. The team is also interested in examining how the pandemic has changed workplace factors such as work design, and in turn their effects on employees' mental health and work attitudes. Dr Chong leads this paper and is employing propensity score matching to estimate the effect of COVID-19. This statistical matching technique accounts for personal and work demographic covariates between samples collected before and during the pandemic to reduce effect bias due to confounding variables.

Continuing our work on age bias and its influence on workers' ability to fully participate in the workplace, Lucinda Iles evaluated the role of supportive leadership in reducing the perception of age bias for mature workers in STEM. Her paper, forming part of her dissertation supervised by Dr Daniela Andrei and Professor Sharon Parker, also examines the role leadership and age bias play in managing turnover and psychological career withdrawal of mature workers in the industry. CEPAR Associate Investigator (AI) Gretchen (Gigi) Petery, PhD student Lucinda Iles, and Professor Sharon Parker also published a commentary where they outlined why and how age-based social categorisation processes and biases might be affected during COVID-19, offering suggestions for future research and practice.

DR JANE CHONG
BSc (Hons) Psychology,
PhD & MPsych in Industrial
and Organisational
Psychology, UWA
RESEARCH FELLOW

Jane Chong is a CEPAR Research Fellow based in the Future of Work Institute at Curtin University. Jane obtained her PhD and Master's in Industrial and Organisational Psychology from the University of Western Australia in 2020 and is a Registered Psychologist. She joined CEPAR as a Research Fellow in 2021 with a keen interest to conduct rigorous research whilst partnering with organisations to support the successful ageing of their age-diverse workforce. Together with the Stream 3 team, Jane has received grant funding over AUD $400,000 to conduct several field research projects. Her research interests include human motivation, work design, and newcomer socialisation.

Jane's research has been published in international outlets including the *Journal of Business and Psychology, Perspectives in Psychological Science*, and *Journal of Personality*. She is also a recipient of multiple research awards, including Best Individual Research Paper presented by the Australian Psychological Society in 2017, the Graduate Student Scholarship presented by the Society of Industrial and Organisational Psychology based in the United States in 2020, and the 2021 UWA School of Psychological Science Award for Excellent PhD thesis in Psychology.

In 2021 our team also focused on strengthening multidisciplinary and cross-stream collaborations. CI Parker is currently actively collaborating with CI Kaarin Anstey and her team (Stream 2) on a systematic review of organisational interventions, as well as a project aiming to use the PATH dataset to investigate links between work design and cognition for mature workers. Relatedly, Dr Andrei was a recipient of the CEPAR Multidisciplinary Collaboration Funding Scheme for the project 'Understanding the drivers and consequences of age discrimination trends in the Australian workforce' conducted in collaboration with Research Fellow Gaoyun (Sophie) Yan from CEPAR Stream 4: Sustainable wellbeing in later Life.

Our team also engaged with several industry partners for demand-driven research related to promoting successful ageing. For example, we contributed to a commissioned project by the Department of Education for a literature review on flexible and part-time work for mature workers that would inform their future policies in this area. We were also commissioned by WA Police for a rapid review on retirement/career transition practices research. The aim of the review was twofold: to understand factors associated with positive and negative retirement outcomes for police offers and to review programs and initiatives available in similar organisations. Partnering with a national financial advisory firm, Dr Jane Chong, Dr Daniela Andrei, and CI Sharon Parker and AI Professor Joanne Earl are embarking on a project in early 2022 to understand changing retirement aspirations and mature workers' return-to-work experiences.

One of the symposiums presented at the Mature Workers in Organisations Virtual Symposium Series launched this year focused on the role of ageing and emotional work stressors for wellbeing. AI Professor Hannes Zacher, from Leipzig University, shared his latest research on 'Strength and Vulnerability: Indirect Effects of Age on Occupational Wellbeing through Emotion Regulation and Physiological Disease'.

During the summer of 2021-2022, our team is also hosting a summer scholarship program led by Dr Chong in collaboration with CEPAR AI Associate Professor Patrick Dunlop, Dr Serena Wee, and CEPAR AI Dr Gretchen Petery. This project aims to design recruitment and selection materials to reduce age bias in mature workers' job seeking process. The findings of this project have real-world and practical applications, such as being used to inform organisations' recruitment and selection strategies.

> Throughout 2021, our team engaged with several industry partners for demand-driven research related to promoting successful ageing.

RESEARCHERS

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AMY WEI TIAN

As teams and organisations become more age diverse, it is important that performance and productivity is maintained. This project examines optimal work designs and organisational practices that attract, motivate, and support mature workers to facilitate engagement and organisational productivity.

In 2021, a key focus of our team was to further develop and refine the *Include, Individualise, Integrate* (3I) framework of organisational meta-strategies aimed at guiding organisational approaches to age diversity management. First,

Senior Research Fellow Daniela Andrei and Lead CI Sharon Parker further refined the 3I framework within a new chapter titled 'Organizational Meta-Strategies for Younger and Older Workers' to be published in the forthcoming book, *Age and Work: Advances in Theory, Methods, and Practice*, edited by CEPAR Associate Investigators (AIs) Professor Hannes Zacher and Dr Cort Rudolph. The chapter expands on the previous work and outlines implications of the proposed framework for theory, research, and practice. Second, to enhance the applicability and utility of the framework we started a new project aimed at developing an associated measurement scale focusing on specific human resource management practices for each of the strategies proposed in the framework. The team, led by Dr Jane Chong, with the support of CEPAR AI Dr Amy Wei Tian, Dr Daniela Andrei, and Professor Sharon Parker, have collected data from several samples, including online panel samples and collaborating organisations. The validation studies conducted this year are promising, with the scale demonstrating acceptable factor structure and construct validity. The team is expecting to begin testing the predictive validity of the scale in the next phase of the study and to publish findings in the following year.

This year, we have also expanded our exploration of team processes associated with age diversity. Professor Sharon Parker was a co-author of the manuscript titled 'Age diversity in teams: Examining the impact of the least agreeable member' published in the *Journal of Organizational Behavior*. This article examined how age diversity can be either detrimental or beneficial for team performance depending on the minimum level of agreeable personalities in the group. They found that the presence of a disagreeable team member could disrupt interpersonal processes by triggering negative age-based stereotypes, resulting in poorer team performance. On the other hand, when the group was generally agreeable, negative social categorisation processes may not be triggered in age diverse teams. The study has implications for the composition of age diverse teams and indicates that personality traits may need to be considered when creating project teams. Within the same area of interest, a new CEPAR summer scholarship program led by Dr Daniela Andrei and involving Dr Susan Reh will aim to adapt an experimental research paradigm to allow a more in-depth investigation into the processes and outcomes associated with the social comparisons that occur when employees of different ages work together.

DR DANIELA ANDREI
MSc Human Resources, Psychology and Marketing, PhD Psychology UBB Romania
SENIOR RESEARCH FELLOW

Daniela Andrei is a CEPAR Senior Research Fellow, located in the Centre for Transformative Work Design at Curtin University. She joined CEPAR in March 2018 after working for five years as a Postdoctoral Fellow for the UWA School of Psychology and UWA Business School. She completed her undergraduate and postgraduate studies in Psychology at the Babes-Bolyai University (UBB) in Romania, where she also worked as an Assistant Professor before receiving a GO8 European Scholarship and moving to Australia. Daniela's research interests revolve around work design, with a focus on the multilevel antecedents of work design as well as on work design consequences for performance, wellbeing

and safety. Within CEPAR, Daniela focuses on understanding how work design can support successful ageing of the mature workforce and the effects of work design related interventions. Daniela's research has been published in journals such as *Journal of Applied Psychology, Journal of Vocational Behavior*, and *Safety Science*. She has co-authored several research reports for industry and government, including the Australian Maritime Safety Authority (AMSA) and the International Mining for Development Centre (IM4DC). Daniela serves as CEPAR stream coordinator for Stream 3.

Managers and leaders play an integral role in the extent to which teams and organisations are successful and productive. PhD Candidate Lucinda Iles commenced a study exploring the role of leadership in individual and team level age diversity climate. Age diversity climate refers to the extent to which employees perceive that their organisation treats employees of different ages fairly and equally. Initial results suggest that person-focused leadership behaviours tend to be more influential of individuals' climate perceptions, whereas task-focused leadership behaviours tend to have a stronger effect on collective perceptions. The findings have implications for the way in which leaders interact with their employees either one-on-one or as a collective.

Continuing the theme of leadership and age diversity, we welcomed PhD Candidate Eva Zellman to the stream. Eva's PhD research is focused on exploring the ways in which leaders can manage age diversity in their teams to foster feelings of inclusion. She is currently conducting a systematic review of leadership and age diversity as well as working on the validation of a measure of age differentiated leadership in an Australian sample. This validation study is part of our larger collaboration with the research team led by Professor Jurgen Wegge in Germany who developed the original scale measuring the extent to which leaders modify their behaviour to meet the changing priorities of workers across the lifespan.

Finally, Dr Daniela Andrei, Professor Sharon Parker and Dr Jane Chong were awarded a research grant by SafeWork Australia. This new two-year grant aims to design, implement and evaluate an organisational work design intervention to reduce work demands for employees in the Australian aged care sector.

> Mature workers represent a significant proportion of the aged care workforce and our team will work closely with our collaborating organisation and their employees to co-design and test an intervention that could inform practices in the wider industry.

ASSOCIATE PROFESSOR MYRA HAMILTON
BA(Hons) PhD Syd
PRINCIPAL RESEARCH FELLOW

Associate Professor Myra Hamilton is a CEPAR Principal Research Fellow at the University of Sydney and is based in the School of Work and Organisational Studies.

She is a sociologist and social policy researcher whose research focus is on gender, ageing and care. Myra's research explores how policies and services can build wellbeing and financial security in work and in care over the life course. Her projects have covered areas such as: the employment experiences and policy needs of parents, grandparents, unpaid carers and young people in care; work/care reconciliation at different times in the life course; gender inequalities in later life; and the aged care workforce. Her current work focuses on mature workers and their experiences of balancing work and care in later life.

She combines traditional academic research with applied policy research for government and non-government organisations, including evaluations of policies and programs. Myra sits on the board of COTA NSW.

FEATURED ASSOCIATE INVESTIGATORS

OTHER ASSOCIATE INVESTIGATORS INVOLVED IN STREAM 3 RESEARCH IN 2020 INCLUDED:

PROFESSOR DONALD TRUXILLO

BS MA PhD Louisiana State University

Donald Truxillo is a Professor of Work and Organizational Psychology at the Kemmy Business School, University of Limerick, Ireland, and Professor Emeritus in Psychology, Portland State University. He collaborates with Sharon Parker and her team on project 3.3.

Professor Truxillo's research on age issues at work focuses on age discrimination, work design for an ageing workforce, and promoting work ability. He is currently an associate editor at *Work, Aging and Retirement* and is currently editor-in-chief for a special issue on age at work for Personnel Psychology. He is the author of over 120 peer-reviewed journal articles and book chapters. He recently co-authored a book on research-based practices to support age differences at work (*Ageless Talent,* Routledge, 2021). He is a Fellow of the Society for Industrial and Organizational Psychology, the American Psychological Association, the Association for Psychological Science, and the International Association for Applied Psychology.

ASSOCIATE PROFESSOR KATE O'LOUGHLIN

BA (Hons) Macq., PhD Syd

Kate O'Loughlin is an Associate Professor (Honorary) in Health Sociology, and a member of the Ageing, Work and Health Research Unit in the Faculty of Medicine and Health at the University of Sydney.

Her research interests and expertise are in population ageing with a particular focus on the baby boom cohort and workforce participation, and ageing-related health and social care policies in Australia and globally. Her current research projects investigate the interplay between paid work and carer responsibilities and its relationships with health and wellbeing; behaviours and exposures across the life course and their effect on health in later life; attitudes to ageing and age discrimination; and technology and ageing-in-place.

She has published widely in the gerontology/ ageing and sociology literature and has a record of successful supervision and mentoring of higher degree students; she is primary supervisor of two CEPAR-affiliated students from the Faculty of Medicine and Health.

Kate collaborates with Marian Baird and her team on project 3.4.

PROFESSOR FABIOLA H. GERPOTT

BSc Ruhr University, MA Corporate Mgt & Econ Zeppelin University, PhD Jacobs University, PhD Vrije Universiteit

Fabiola H. Gerpott is a Professor of Leadership at the WHU – Otto Beisheim School of Management in Germany. She joined CEPAR in July 2018 after conducting a research stay at the Future of Work Institute with Chief Investigator Sharon Parker.

Within CEPAR, Fabiola focuses on understanding how organisational interventions can improve knowledge transfer and learning between age-diverse employees and, in doing so, contribute to successful ageing of the mature workforce. She is also interested in studying technology acceptance and digital leadership in an age-diverse workforce. Furthermore, she contributes to the Mature Workers in Organisations Survey.

Fabiola's research has been published in journals such as the *Academy of Management Journal, Academy of Management Learning & Education, Human Relations* and the *Journal of Applied Psychology*. Fabiola also uses her research skills to develop intervention programs for managing an age-diverse workforce in organisations, particularly in the automotive industry. She has attracted grants from national foundations as well as industry for her work.

DR GRETCHEN (GIGI) PETERY

BSc Psychology Washington State, MA
PhD Industrial-Organizational Psychology UConn

Gigi Petery joined CEPAR as a Research Fellow in June 2018 and worked within the Future of Work Institute at Curtin University, Perth until December 2020. She continues to collaborate with CEPAR as an Associate Investigator in her role as Co-Manager of the National Center for Productive Aging and Work at the National Institute for Occupational Safety and Health (NIOSH) in the US.

Gigi specialises in issues central to an ageing workforce. Her research focuses on workplace age bias and discrimination, successful ageing at work, alternative measures of age, and worker health and wellbeing, and has published in international journals. She has presented her research internationally, including at conferences for the Society of Industrial and Organizational Psychology; European Association of Work and Organisational Psychology; European Association of Occupational Health Psychology; Gerontological Society of America; and Society for Occupational Health Psychology.

ASSOCIATE PROFESSOR PATRICK DUNLOP

BSc, MPsych PhD UWA

Patrick completed his Master of Industrial and Organisational Psychology and PhD at the University of Western Australia in 2012 and he is now an Associate Professor at the Future of Work Institute at Curtin University. His research is focused on personnel recruitment, assessment, and selection and how these processes occur in the digital age.

Patrick also has three years' of professional experience working in the recruitment sector as a psychological assessment consultant. His research with the emergency services volunteer sector, funded by the Bushfire and Natural Hazards CRC and the Department of Fire and Emergency Services in Western Australia, focuses on understanding how to apply the principles learned from organisational psychology to the attraction and retention of emergency services volunteers across Australia.

ASSOCIATE PROFESSOR AMY WEI TAN

MSc(Cardiff University), PhD (Cardiff University)

Amy Wei Tian is an Associate Professor in the School of Management and Marketing at Curtin Business School, Curtin University. Amy received her PhD in Management in 2011 from Cardiff Business School, Cardiff University, UK. Her research focuses on three primary domains: 1) Strategic Human Resource Management, 2) Leadership, and 3) multiculturalism at work. Amy's research has been published in top tier journals such as *International Journal of Business Studies, Leadership Quarterly, Journal of Organizational Behavior,* and *Human Resource Management*.

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RESEARCH STREAM 4

SUSTAINABLE WELLBEING IN LATER LIFE

STREAM LEADER / MICHAEL SHERRIS

This stream undertakes research to provide businesses, households, and governments with new knowledge and expanded options on a range of policy and practice issues confronting ageing societies. It will take the macro-demographic projections of Stream 1, the insights about cognitive ageing and decision making from Stream 2, and the evidence concerning organisation behaviour from Stream 3, to build a comprehensive evidence base for strategies and actions to enhance wellbeing in later life.

The stream comprises six projects:

4.1   MORTALITY AND MORBIDITY RISK

4.2   MACRO-HEALTH OUTCOME SIMULATIONS

4.3   SOCIAL DETERMINANTS OF SUCCESSFUL AGEING

4.4   RETIREMENT POLICY ISSUES

4.5   FINANCIAL AND INSURANCE PRODUCT DESIGN

4.6   GUIDING FINANCIAL DECISION MAKING

4.1 MORTALITY AND MORBIDITY RISK

RESEARCHERS

MICHAEL SHERRIS
LEN PATRICK GARCES
KYU PARK
DANIEL ALAI
ANNAMARIA OLIVIERI
ERMANNO PITACCO
ADAM SHAO
ANDRÉS VILLEGAS
PENGYU WEI
JONATHAN ZIVEYI
SALVATORY KESSY
YULONG LI
MICHELLE VHUDZIJENA
YUXIN ZHOU

This project undertakes modelling of mortality and morbidity risk to understand these risks for individuals and to support research on financial and insurance product design (Project 4.5).

This research group has been developing new aggregate mortality models for both individual risk and systematic risks, as well as transition rate models of both health status and functional disability. The models capture features required for the design and pricing of innovative financial and insurance products to finance or insure post-retirement risks from both an insurer/ pension fund and an individual perspective.

In 2021, the project produced four publications in highly ranked actuarial research journals, in addition to several working papers. Presentations have been made mostly at virtual local and international actuarial conferences and related events due to the ongoing COVID-19 pandemic. These events include the 24th International Congress on Insurance: Mathematics and Economics, the 2021 All Actuaries Virtual Summit, the 56th Actuarial Research Conference, and the 29th Colloquium on Pensions and Retirement Research.

Mortality Modelling

In 2021 progress continued to be made on the development and estimation of multi-factor, continuous-time affine mortality models. These models are estimated using age-cohort mortality data for complete cohort data. The affine mortality library of R code for the efficient estimation of affine mortality models and projection of survival curves was developed and made available. The library, currently hosted on Github, is being developed as an R package. The code has been used to conduct a multi-country and multi-cohort comparison of affine models of mortality rates. The estimation methods are being developed to include the case of incomplete cohort data. Research has commenced on the inclusion of jump dynamics in the affine mortality models to capture events which impact mortality rates over specified periods such as wars, pandemics (COVID), and medical advancements impacting multiple cohorts at the same time. Extending the models to capture older age variability in mortality and to better capture age-dependent correlations in mortality change is in progress.

Application of data analytic and machine learning techniques to aggregate and individual level mortality data has also continued throughout this year. The research has assessed how combining mortality models using ensemble machine learning approaches can improve forecasting of future mortality compared with single mortality models. Individual data from the HRS has been used to assess how clustering of different covariates, or risk factors, such as BMI and self-assessed health, can be used to better forecast mortality allowing for heterogeneity. An important innovation has been the analysis of mortality date from the countries in the Human Mortality Database selecting the factors that forecast mortality using cross-validation and

DR LEN PATRICK GARCES

BScApMaths(MathFin), AB(Econ), MAM(MathFin), Ateneo de Manila University, PhD UniSA

SENIOR RESEARCH ASSOCIATE

Len Patrick Garces joined the UNSW node of CEPAR as Senior Research Associate in September 2021. Len works with Chief Investigator Professor Michael Sherris' team on research projects focusing on advanced risk modelling for longevity and health risk, continuous-time stochastic mortality models, and their applications to actuarial valuation. His current work investigates the theory and estimation of multi-factor affine jump-diffusion mortality models.

Len obtained his PhD at the University of South Australia in 2021. His PhD thesis focused on exchange option pricing under stochastic volatility and jump-diffusion dynamics. Parts of his thesis have been published in *Quantitative Finance*. Prior to 2018 he held a full-time teaching position at the Department of Mathematics, Ateneo de Manila University, Philippines.

Len's research interests are on the actuarial and financial applications of stochastic analysis and probability theory and the development of numerical and statistical methods towards these applications.

regularization techniques. R software was developed to apply cross-validation and regularization techniques to select the factors for optimal forecasting of mortality rates.

Future research aims to further extend multi-factor affine mortality models and develop further the R software for estimation and forecasting of these models. There will be an increased focus on Australian data, including the Survey of Disability, Ageing, and Carers (SDAC), the Household, Income and Labour Dynamics in Australia (HILDA) data, and data from the Department of Health and the Australia Institute of Health and Welfare for mortality, health status, and functional disability modelling.

Morbidity Modelling

This project's research includes morbidity modelling to inform Long-Term Care (LTC) insurance design and policy development. The research has developed innovations in multiple-state transition models of functional disability that include trends and uncertainty in morbidity, as well as health status.

The modelling of mortality and functional disability based on individual level transition data has jointly modelled health status and functional disability. These models have incorporated trends and uncertainty in transition rates and have been estimated using US HRS data and Chinese CHRLS data. The transition rates estimated from the individual transition data are used with micro-simulations to estimate heathy life expectancy and disability-free life expectancy. The research has highlighted the importance of including both health status and functional disability in transition rate models for mortality as well as the incorporation of trend and uncertainty for actuarial and insurance applications. The models have been applied to assess future mortality trends and the potential impact of these trends on healthy and disability-free life expectancy. The results are critical in understanding the structuring, pricing and risks of retirement products that incorporate both longevity risk and long-term care.

Predictive models are being applied to health status and functional disability in a multiple-state functional disability model using machine learning and individual-level data. This will be further extended and developed in future research.

> The research has developed innovations in multiple-state transition models of functional disability that include trends and uncertainty in morbidity, as well as health status.

ASSOCIATE PROFESSOR JONATHAN ZIVEYI

BSc (Hons) Applied Mathematics NUST Zimbabwe, PhD Quantitative Finance UTS, GradCert University Learning and Teaching UNSW

ASSOCIATE INVESTIGATOR

Jonathan is an Associate Investigator at the ARC Centre of Excellence in Population Ageing Research based at the UNSW Business School where he is an Associate Professor and Associate Head in the School of Risk and Actuarial Studies. He received his PhD in Quantitative Finance from the University of Technology Sydney where his thesis was on the evaluation of early exercise exotic options. His current research interests include longevity risk management, retirement income product design and valuation of guarantees embedded in variable annuities. His research output has been published in esteemed quantitative finance and actuarial journals such as *The ASTIN Bulletin, Insurance:*

Mathematics and Economics, and *Quantitative Finance* among others and has been presented at various international conferences. He has been successful in attracting major research grant funding from The Society of Actuaries, Australian Research Council and Actuaries Institute.

4.2 MACRO-HEALTH OUTCOME SIMULATIONS

RESEARCHERS

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JEROMEY TEMPLE
TOM WILSON
JANE FRY

External collaborators

ALAIN BELANGER
PATRICK SABOURIN
(BOTH QUEBEC INSTITUT NATIONAL DE LA
RECHERCHE SCIENTIFIQUE)

Australia is facing an ageing population and associated potential labour shortages, declining support ratios and potential inadequacies of government revenues in the face of rising expenditure demands. This has important implications for the sustainability of social security, healthcare, aged care and retirement. The current approach to population projections uses the cohort component model, which is limited in the number of population categories it can handle effectively. However, the contributions and needs of Australia's future population are affected by a wide range of demographic and socio-economic variables. In order to accommodate these influences and provide finer grained projection output detail, a

microsimulation model is required to project the future diversity of Australia's population, especially the older population.

Through Project 4.2, an individual-level microsimulation model of the Australian population will be constructed to enable projection of the Australian population according to various characteristics, including age, sex, country of birth, English proficiency, education and labour force participation. The Australian model will be part of an international collaboration led by the Quebec Institut National de la Recherche Scientifique and also involving the European Commission Joint Research Centre, the Asian Demographic Research Institute of Shanghai University, Statistics Canada, and Pennsylvania State University.

In February 2021, Dr Jane Fry was appointed as Research Fellow to work on the development of the model. The team have identified the overall structure of the model and its sociodemographic modules and have access to the required Australian data sources. A base population for the model consisting of over 250,000 individuals derived from the 2016 Census is near completion. This population will be updated to the 2020 Estimated Resident Population using the Iterative

Proportional Fitting technique. At the same time, our Canadian partners are constructing the model infrastructure based on the existing Canadian microsimulation model. In 2022, work will commence on the estimation of the transition probabilities for each of the modules in the model.

> …an individual-level microsimulation model of the Australian population will be constructed to enable projection of the Australian population according to various characteristics, including age, sex, country of birth, English proficiency, education and labour force participation.

DR JANE FRY
BEc, MEc, PhD Monash
POSDOCTORAL
RESEARCH FELLOW

Jane Fry is a Postdoctoral Research Fellow in the Demography and Ageing Unit at the University of Melbourne node of CEPAR. Having spent 14 years as a government economist with the Productivity Commission, she undertook her PhD in health economics at Monash University and completed it in 2020.

Jane is working on Research stream 4 (Sustainable wellbeing in later life, specifically macro-health outcome simulations). Her primary research interest is in quantitative modelling applied to various economic issues affecting older people. She has investigated how labour market conditions affected older Australians during COVID-19, energy

poverty among retirees, retirement and wellbeing, the heat–eat trade off among retirees in Australia and health literacy and older people. She is also providing input parameters and data to an individual-level microsimulation model of the Australian population that will be used to project the Australian population according to various characteristics, such as age, sex, country of birth, English proficiency, education, labour force participation and (for older individuals) type of residence. The project will provide a tool for policy analysis and unique detailed information about the future size and composition of the older Australian population.

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4.3 SOCIAL DETERMINANTS OF SUCCESSFUL AGEING

RESEARCHERS

FIONA BLYTH
KAARIN ANSTEY
JULIE BYLES
SAMAN KHALATBARI-SOLTANI
KATE MILLEDGE
JAMES NAZROO
RICHARD BURNS
VASANT HIRANI
CAROL JAGGER
KIM KIELY
FIONA STANAWAY
LIDAN ZHENG

External Collaborators

DAVID HANDELSMAN
DAVID LE COUTEUR
VASI NAGANATHAN
MARKUS SEIBEL
LOUISE WAITE
CLIVE WRIGHT
(ALL FROM UNIVERSITY OF SYDNEY)

DAVID SCOTT
(MONASH UNIVERSITY)

This project mainly uses data from three large Australian cohort studies: The Concord Health and Ageing in Men Project (CHAMP), the Path Through Life Study (PATH) and the Australian Longitudinal Study of Women's Health (ALSWH). CEPAR CI Fiona Blyth leads CHAMP; CEPAR CI Kaarin Anstey leads PATH, and CEPAR Associate Investigator (AI) Julie Byles is co-director of the ALSWH.

CHAMP started in 2005 when 1705 men aged ≥70 years were recruited from the community around Concord Hospital in Sydney. During the early stages of 2021 CHAMP finished collecting data on older men's experience during the pandemic via a COVID-19 follow up survey. A total of 237 men participated altogether. Data for this and CHAMP Wave 5 is currently being cleaned and prepared for future analysis and publication.

Much of the CHAMP research in 2020 was directly concerned with social determinants of health. For example, Research Fellow Saman Khalatbari-Soltani found that lower education and occupational position are associated with a higher rate of falls among Australian-born men; however, the opposite association was evident for educational level among migrants born in non-main English-speaking countries.

She also found that low SEP as assessed by three individual SEP indicators and a cumulative score was associated with more all-cause non-elective hospitalisations and longer cumulative time in hospital for non-elective hospitalisations among older men in Australia. No associations were found between SEP and elective hospitalisations, except for income and number of elective hospitalisations, even though disadvantaged older people are likely to have higher level of need. She also led a systematic review that provides evidence that there is an association between SEP, as measured by educational level and income/wealth and healthy ageing. In a collaboration with UK researchers, Professor Fiona Blyth and Dr Saman Khalatbari-Soltani, highlighted the public health perspective of pain, work, and the workplace.

AI Associate Professor Vasant Hirani leads the nutrition and body composition research in CHAMP. There have been a number of CHAMP papers in 2021 that have examined the relationship between nutrition and health outcomes at follow-up. To highlight, PhD student Rebecca Luong found that maintaining or increases in dietary total iron and non-haem iron intakes over three years were associated with

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DR SAMAN KHALATBARI-SOLTANI

MSc Nutritional Science UPM, PhD Life Sciences Lausanne, PhD Epidemiology and Public Health SSPH+

RESEARCH FELLOW

Saman Khalatbari-Soltani is a CEPAR Research Fellow located in the University of Sydney School of Public Health. She joined the Centre in September 2018 after working for one year as a Postdoctoral Fellow at the Department of Internal Medicine, University of Lausanne, Switzerland. She holds a PhD in Life Sciences (University of Lausanne, Switzerland), a PhD in Epidemiology and Public Health (Swiss School of Public Health) and a Master of Science in Nutritional Science (University Putra Malaysia). During a one-year Fellowship at the University of Cambridge, she trained in Nutritional Epidemiology.

Her current research encompasses the areas of social determinants of healthy ageing, health inequalities, and the role of behavioural, psychological, and biological factors in the genesis of health inequalities at older ages – with the ultimate aim of improving perceptions of and indicating possibilities for future health policy. Her research has been published in leading epidemiology, gerontology, and health journals, such as *Ageing Research Reviews, International Journal of Epidemiology, Journal of Epidemiology and Community Health,* and *Journal of Gerontology: Series A.*

reduced incidence of frailty in older men. The results showed that adherence to a Mediterranean diet is associated with higher lean muscle mass, and fewer falls in community-dwelling older men. CEPAR PhD graduate Arpita Das found that inadequate intake particularly protein, n-6 PUFA, n-3 PUFA, magnesium and calcium, was significantly associated with sarcopenia in older men. CHAMP collaborators David Scott and PhD student Carrie-Anne Ng showed that older men who engaged in physical activity of high and rapid impact maintained higher bone mineral density, while higher energy expenditure was associated with reduced falls risk. CHAMP researchers are currently investigating the influence of non-haem and haem iron intakes on cardiometabolic health outcomes and dietary patterns on frailty and cardiometabolic outcomes on the health of older Australian men. Longitudinal oral health data has also been prepared for analysis, under the guidance of Professor Woosung and Dr Deborah Cockrell, who will be overseeing the analysis and publication in 2022.

The CHAMP study has also continued to analyse and publish results around the oral health data collected during the 4th wave of the CHAMP study, focusing on how it may impact social

determinants of health such as nutrition. CHAMP collaborator Dr Sachiko Takehara, and A/Prof Vasant Hirani found that poor oral health was an independent risk factor for weight loss in older men. Another paper from Dr Takehara found that lower numbers of Functional Tooth Units (FTUs) were associated with a perceived need for dental treatment in older adults. In another publication this year maintaining adequate numbers of natural FTUS was also associated with adequate nutrient intakes in older men.

In 2021 the oldest women in the ALSWH turned 100. The study commenced following these women in 1996, when the women were 70-75. In 2021, the women are aged 95-100 with almost 500 women participating in six monthly surveys. Some women have completed 26 surveys over the past 25 years. Some selected women have also participated in in-depth interviews to gather an understanding of their experiences of ageing, and what brings their lives meaning. The focus of the research over the last two years has also included, healthy and disability free life expectancy, healthy ageing, and use of health and aged care services.

> ...Professor Fiona Blyth and Saman Khalatbari-Soltani... argued that extending working life is associated with a greater number of multiple health complaints; with trends towards working at older ages than in previous decades, there is the potential for the effects of pain on individuals and society to be more significant.

PROFESSOR JAMES NAZROO
BSc MB BS Lond.,
PhD UC Lond.
PARTNER INVESTIGATOR

James Nazroo is Professor of Sociology at the University of Manchester, UK, and Fellow of the British Academy. He also serves as co-Director of the Manchester Institute for Collaborative Research on Ageing and Deputy Director of the Centre on Dynamics of Ethnicity. His research focuses on issues of inequality, social justice and underlying processes of stratification, particularly in relation to ageing and ethnicity. He works on the social determinants of health and wellbeing in later life, social inequalities over the life course, and longitudinal surveys of health and retirement.

He was the lead investigator for the six year interdisciplinary research programme 'Frailty, Resilience and Inequalities in Later Life (fRaill)' (2011-2017); is a Chief Investigator on the ongoing 'English Longitudinal Study of Ageing (ELSA)'; and was a Partner Investigator on the ARC Discovery grant 'Socioeconomic determinants and health inequalities over the life course' being conducted in collaboration with CEPAR Investigators Kendig, Loh, Byles and O'Loughlin.

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4.4   RETIREMENT POLICY ISSUES

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JOHN PIGGOTT
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MI HONG

GUANGGANG FENG
(BOTH ZHEJIANG UNIVERSITY)

GUY MAYRAZ
(SYDNEY UNIVERSITY)

2021 has been a very active year for continuation of work on retirement income policy in Australia and internationally (Germany, Norway, USA, China, and Indonesia). In the first quarter of the year, CEPAR Investigators participated in the Council on Ageing's (COTA) National Policy Forum on Retirement Income Policy, as well as in a Roundtable on 'Completing Australia's Retirement Income System', convened by the Academy of the Social Sciences in Australia, the Tax and Transfers Policy Institute and the Social Policy Institute at ANU. Scientia Professor John Piggott presented an overview of Australia's Retirement Income Review Report, including key messages, questions and issues.

In June, the Australian Government released the 2021 Intergenerational Report which projects an outlook for the economy, the budget and long-term sustainability over the next 40 years. Related contributions from the CEPAR project team include Senior Research Fellow Rafal Chomik's analysis of the report noting that "the report is optimistic about the rebound to migration, about increases in labour force participation, and about average productivity growth" as well as a CEPAR four-part Research Brief, 'Tapping into Australia's ageing workforce: Insights from recent research' (see below).

This year concluded with the 29th Colloquium on Pensions and Retirement Research in December featuring over 50 high-level talks and presentations, especially topical was a panel session focused on the Australian Government's Retirement Income Covenant, chaired by Professor Piggott. Colloquium plenary sessions cover financing aged care; the retirement sandbox program; and the macroeconomic environment for superannuation and pensions.

RAFAL CHOMIK
BEcFin UWA, MEc
London Metropolitan
SENIOR RESEARCH FELLOW

Rafal Chomik is a Senior Research Fellow at CEPAR, located in the UNSW Business School. He joined CEPAR in April 2012. Rafal has worked in public administration and policy analysis for over a decade, initially as a project manager in economic regeneration and subsequently as an economist focusing on social policy. He has experience in economic and business consulting in the private sector, working as an economic advisor for the British Government and as a pensions economist at the Organisation for Economic Cooperation and Development in Paris. He specialises in social policy design, public and private pension analysis, static microsimulation modelling of the tax-benefit system, and poverty and income measurement. His current work at CEPAR is centred on producing policy related briefing papers, summarising existing CEPAR and external research and assisting the secretariat in producing technical content for conferences and the media. He is also undertaking a research project on the interactions between demography and inequality.

Selected research highlights this year includes:

• Pensions, income taxes and homeownership: A cross-country analysis: Hans Fehr, Maurice Hofmann and George Kudrna: This paper studies the role of pensions and income taxes in determining homeownership and household wealth. It provides a cross-country analysis, using tax and pension policy designs in Germany, the US and Australia. These countries have similar incomes per capita but very different homeownership rates, with the US and Australia having much higher homeownership compared to Germany. The stochastic, overlapping generations (OLG) model with tenure choice is calibrated to Germany featuring German statutory public pension and dual income tax systems, and then applied to study the effects of alternative income tax and pension policy structures. Simulation results indicate that the US and Australian policy designs have a dramatic impact on homeownership, explaining more than half of the observed differentials and significant macroeconomic effects are due to differences in tax and pension policies.

• Tapping into Australia's ageing workforce: Insights from recent research Rafal Chomik and Fatima Jamal Khan: The research brief presents a series of evidence-based strategies on what employers can do to manage a multigenerational workforce, and what they can do to respond to better recruit, deploy, and retain older workers. To help inform workplace policy and practice, this Research Brief features and synthesises research outcomes from more than 30 Centre researchers, including CEPAR CIs Sharon Parker and Professor Marian Baird. Employers need better strategies to seize the opportunities that an older workforce presents and turn it to their competitive advantage. Failing to adapt would be costly to individuals, firms, and society. Governments can help with a more strategic approach, continuing to support health, mainstream lifelong learning, and address shortcomings related to regulation, incentives, and labour market programs.

PROFESSOR HANS FEHR
MA Econ
PhD Econ Regensburg
ASSOCIATE INVESTIGATOR

Hans Fehr is Professor of Economics at the University of Wuerzburg in Germany. As a CEPAR AI he collaborates with researchers on Projects 1.2 and 4.2. He joined the Centre in January 2018 after visiting the CEPAR UNSW Sydney node during his sabbatical. His main research interests are in the field of quantitative public economics. In the past he has analysed the economic consequences of population ageing and various tax policy and social security reforms by means of computable general equilibrium models with overlapping generations. His research is published in various journals including the *European Economic Review, Journal of Economic Dynamics & Control, Review of Economic Dynamics*, and the *Scandinavian Journal of Economics*. Hans is also a Research Fellow at the Network for Studies on Pensions, Aging and Retirement (Netspar) in Tilburg and the Center of Economic Studies (CESifo) in Munich.

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4.5 FINANCIAL AND INSURANCE PRODUCT DESIGN

RESEARCHERS

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This project aims to analyse and develop sustainable and cost-effective retirement income products, allowing both individuals and institutions to manage longevity, health, and aged-care risks. These products cover enhanced annuities, pooled annuity products, variable annuities, care annuities, equity release and long-term care products. Combinations of these products to provide flexible innovations are an important focus of the research. These products allow individuals to enhance their retirement income, reduce risks through efficient risk-sharing and financing, reduce government fiscal pressures, and provide innovative solutions for private insurance markets.

In 2021, the project produced five publications in highly ranked actuarial research journals, in addition to several working papers. Presentations have been made mostly at virtual local and international actuarial conferences and related events due to the ongoing COVID-19 pandemic. These events include the 24th International Congress on Insurance: Mathematics and Economics, the 2021 All Actuaries Virtual Summit, the 56th Actuarial Research Conference, and the 29th Colloquium on Pensions and Retirement Research.

Retirement income products

The impact of retirement income products on government pensions, including life annuities, deferred annuities, and life annuities with higher payments when an individual has impaired health, has been an important focus of the research. Work in progress has demonstrated the benefits that these longevity insurance products can have on future government pension obligations. The research shows how multiple health state models can provide a richer understanding of government future pension obligations as well as health and aged care costs. Aggregate mortality models, that forecast average future mortality rates, do not capture the impact of mortality heterogeneity on the distribution of future lifetimes. This heterogeneity has a significant impact on individual and government retirement costs.

Research on the design of pooled annuities and the sharing of investment and mortality risk in mutual retirement income product pools has progressed. The smoothing of investment returns to reduce market volatility has been investigated by comparing different mechanisms to smooth crediting rates for investment returns. Actuarial fairness and equity in these pools for sharing both investment risk and mortality risk has been a fundamental consideration in the design of these products. Extension of pooling and risk sharing to care annuities and innovations in products that combine health and mortality risks has also been developed during the year.

DR KYU PARK
BCom/BSc University of Auckland, MCom University of Sydney, PhD Macquarie University
SENIOR RESEARCH ASSOCIATE

Kyu is a CEPAR Senior Research Associate in the Risk and Actuarial Studies Department at UNSW.
He is working on research projects in the Sustainable Wellbeing in Later Life research stream, focusing on the development of longevity and health risk models and optimal design of health and aged care insurance products with applications to various public sector support policies for retirement incomes and aged care.

He recently completed a PhD in Actuarial Studies and Business Analytics at Macquarie University for his work on analysis to find causes and outcomes of medication adherence in aged population.

Portfolio strategies for life insurers and pension funds

Research continued with target volatility investment strategies for insurers, pension and superannuation funds. These strategies aim to produce a more consistent level of equity market risk than traditional buy and hold and constant mix portfolio strategies. Research during the year has assessed the impact of leverage constraints as well as the impact of market crashes. Targeting constant volatility strategies require changes to market exposures which is implemented using a futures overlay. An implementation issue for these strategies is the extent of leverage in the equity component. The research has demonstrated empirically that the higher return per unit risk of target volatility strategies is not impacted by the degree of leverage. The impact of market crashes including COVID-19 was also assessed. Target volatility strategies were shown empirically to reduce the negative returns of market crashes and to provide a level of volatility closer to long run equity volatility in the post-crash period resulting in an overall higher return than buy and hold or constant mix strategies.

These results are important for superannuation funds with market exposure to equities that wish to manage the volatility risk of the fund while enhancing returns to members.

Variable annuities

Research on the valuation and risk management of variable annuities has also continued. An assessment of the impact of taxation on the pricing of variable annuities has been finalized during the year. The application of machine learning to the risk hedging of variable annuities has also been investigated. Since the link between risk factors and price sensitivities used in hedging for these products is non-linear, numerical techniques used in machine learning have been shown to improve the risk hedging of these products.

Another development in the design of variable annuities has been the incorporation of long-term care insurance into variable annuity product design. Variable annuities with guaranteed lifetime income benefits as well as long term care insurance benefits provide coverage of major retirement risks including equity, longevity, and functional disability. Innovations in the design, efficient pricing and risk management of variable annuities is a fundamental contribution to providing a flexible guaranteed retirement income product.

These results are important for superannuation funds with market exposure to equities that wish to manage the volatility risk of the fund while enhancing returns to members.

PROFESSOR ANNAMARIA OLIVIERI

Degree in Business Economics University of Parma, Degree in Actuarial Science and Statistics University of Florence, PhD University of Brescia

ASSOCIATE INVESTIGATOR

Annamaria Olivieri is Professor of Mathematical Methods for Economics, Actuarial Science and Finance in the Department of Economics at the University of Parma. Her areas of research include life and health insurance modelling and risk management. She is an actuary and full member of the Istituto Italiano degli Attuari (Italy) and Associate Editor of the European Actuarial Journal. In 2011 she was awarded the Bob Alting von Geusau Memorial Prize, together with Ermanno Pitacco, for the best paper published in the ASTIN Bulletin on an AFIR related topic. She has presented in continuous professional development courses and masters programmes (in Italy and abroad) for both actuaries

and non-actuaries, in the field of actuarial mathematics and risk management techniques. She is an author and co-author of many research articles and the textbooks, Introduction to Insurance Mathematics: Technical and Financial Features of Risk Transfers, 2nd edition (2015) with Ermanno Pitacco, and Modelling Longevity Dynamics for Pensions and Annuity Business (2009) with Pitacco, Denuit and Haberman.

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External Collaborator

JACKI ELLIS
(AWARE SUPER)

The aim of this project is to contribute to the understanding of how people make retirement saving and spending decisions and to identify the means to facilitate the best possible decisions.

In 2021 research associated with this sub-project was characterised by strengthened relationships with external collaborators Cbus, UniSuper, Aware Super, Household Capital and Pension Boost. Outputs were presented at over 10 international and domestic conferences including: the Netspar International Pension Workshop 2021, 24th International Congress on Insurance: Mathematics and Economics, ARIA Annual Meeting, International Longevity Risk and Capital Markets Solutions Conference, Household Capital Third Pillar Summit. The paper *Who Pays the Price for Bad Advice?: The Role of Financial Vulnerability, Learning and Confirmation Bias* (co-authored by Agnew, Bateman, Eckert, Iskhakov and Thorp) was awarded 2021 Center for Financial Planning Board Best Paper Award at the annual Academic Research Colloquium for Financial Planning and Related Disciplines.

Home equity release to support retirement

Housing wealth is typically the largest component of retirees' portfolios yet is under-utilised as a source of retirement financing. In 2021 researchers in stream 4.6 (Bateman, Ho and Hanewald) developed state-of-the-art economic and actuarial models to identify the lifetime welfare implications from alternative uses of housing wealth in retirement – including downsizing, the government-offered Pension Loans Scheme (PLS), private reverse mortgages and home reversion - by single and couple Australian retiree households with different wealth portfolios and preferences. The modelling showed that for most typical household types, the PLS results in the highest lifetime welfare. However, private reverse mortgages are more attractive if households prefer a large lump-sum at retirement age and households with lower house price growth expectations would benefit most from home reversion. Furthermore, where households have strong bequest motives, downsizing and home reversion are least favourable.

A stand-alone study of the PLS - an Australian government-offered reverse mortgage in which loan payments are linked to public pension amounts (Bateman, Hanewald and Sun) - found that utilisation of the PLS up to the maximum amount (1.5 x the full Age Pension) would be welfare enhancing for most household types. This result is robust to sensitivity analysis of the key model parameters and holds for both the current PLS and the revised design from July 2022 which allows limited lump sum advances. Increasing the maximum allowable loan payment

INKA EBERHARDT
MSc Econ Utrecht
RESEARCH FELLOW

Inka Eberhardt is a CEPAR Research Fellow, located in the UNSW Business School. She joined the Centre in October 2018.

She completed her undergraduate studies in political studies and economics in the Netherlands. In 2017, she also visited Professors Michael Norton and John Beshears at Harvard Business School.

Inka is interested in the interface between behavioural economics and pension systems. For her dissertation, Inka worked together with the *Bedrijfstakpensioenfonds Detailhandel*, the pension fund of the Dutch retail sector. She uses field experiments and online surveys to research the effectiveness of pension communication on savings behaviour and retirement decisions. The aim of her research is to improve communication and to enable consumers to make better choices.

to twice the full Age Pension was shown to be particularly beneficial to single females with modest housing wealth.

Behavioural responses to market volatility

In mid-2021 an experimental survey of investment and contributions choices in periods of extreme market volatility was administered to a large sample of superannuation fund members. This project is a collaboration with Aware Super (Bateman, Eberhardt, Ellis and Wu) and investigates the investment switching and voluntary contributions behaviour of Aware Super members in default and choice investment options and the effectiveness of alternative communication treatments designed to stimulate engagement and help members overcome their behavioural biases. Preliminary results indicate that a large proportion of fund members changed investment options and voluntary contribution amounts and that this was boosted by the intersection of market volatility and treatments designed to build engagement. Further analysis will take place in 2022 including comparison of hypothetical experimental and actual members decisions.

A dynamic structural model of superannuation, financial and housing decisions

In a project co-funded by industry partner UniSuper and led by AI Isabella Dobrescu and Research Fellow Akshay Shanker, a dynamic lifecycle model incorporating housing, mortgage and renting decisions with a realistic superannuation contribution, plan and portfolio choice architecture has been built. The rich pension and housing choice structure results in a high dimensional, non-convex optimisation problem and new mathematical optimisation theorems have been developed that allow efficient solutions and model estimation. Policy counterfactuals confirm the key role of housing in building wealth and that wealth accumulation could be enhanced with greater flexibility in superannuation choice architecture.

Retirement insurance products

A project investigating preferences for retirement insurance products in China was completed in 2021 (Bateman, Fang, Hanewald, Wan). One part of the project involved the design and implementation of an online experimental survey to elicit and analyse preferences for portfolios of retirement insurance products including annuities, critical illness insurance (CII), and long-term care (income) (LTC) insurance. On average, the most preferred retirement portfolio comprised health-contingent insurance that covers 50% of the expected out-of- pocket (OOP) costs for critical illnesses and LTC, a monthly annuity of about 19.6% of the average disposable income in urban China, with the remainder allocated to a savings account. These stated preferences align somewhat with the optimal portfolio for retirees in China where at least 30% of retirement wealth is allocated to CII, between 5% to 15% to LTC (income) insurance and the reminder to a life annuity (with the optimal allocation to a life annuity higher for those with lower pension income payments).

Retirement benefit projections

Finally, work continued on the retirement benefit projections project, jointly funded by Cbus superannuation fund, with new analysis of recent years of the retirement income estimates (RIE) field data, and the implementation of follow-up online experiments to investigate the impact of inclusion of income projections with retiree member statements (Bateman, Dobrescu, Hoang, Liu, Newell, Qian, Thorp).

CHENG WAN
PhD, UNSW Sydney,
Msc KU, Leuven,
BSc Wuhan University
RESEARCH ASSOCIATE

Cheng Wan is a Research Associate in CEPAR's UNSW Business School node. He has recently submitted his PhD thesis on retirement insurance in China at the UNSW School of Risk & Actuarial Studies. Cheng has a Master of Science in Statistics from Katholieke Universiteit Leuven and a Bachelor of Science in Computational Mathematics from Wuhan University. Before pursuing the PhD, Cheng was a Research Manager in Willis Towers Watson Research and Innovation Centre. Cheng's main research interests focus on pensions economics and finance, household consumption and savings behaviour, the economics of cognitive ageing and health risks of environmental factors. He has analysed the stated and optimal demand for life annuities, critical illness insurance and long-term care insurance in urban China, and he has studied the health effects of air pollution on multimorbidity, cognition and disability. Cheng has shared his research internationally, including the International Congress on Insurance: Mathematics and Economics, American Risk and Insurance Association Annual Meeting, colloquiums from International Actuarial Association, Netspar International Pension Workshop and the International Health Economics Association World Congress.

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FEATURED ASSOCIATE INVESTIGATORS

OTHER ASSOCIATE INVESTIGATORS INVOLVED IN STREAM 4 RESEARCH IN 2021 INCLUDED:

DR ANDRÉS VILLEGAS

BSc Mathematical Engineering Eafit University, MSc Industrial Engineering University of Los Andes, PhD ActuarSc Bayes Business School (formerly Cass), City, University of London

Andres Villegas is a Senior Lecturer in the School of Risk and Actuarial Studies and an Associate Investigator at CEPAR. Andres' research interests include mortality modelling, longevity risk management, and applications of analytics techniques in actuarial science and finance.

Andres is committed to the development of tools that can help make academic research more accessible to industry and to the wider actuarial community. He is the developer and maintainer of the R Package StMoMo for stochastic mortality modelling which has achieved 42000+ downloads and is now being used by researchers, risk managers, insurance supervisors and students around the world.

Andres has extensive experience in developing collaborative research with the actuarial profession and has completed major contract research projects for the UK Institute and Faculty of Actuaries and for the Society of Actuaries in North America on longevity-related topics. He is an Associate Editor of the *Annals of Actuarial Science* and a member of the Australian Actuaries Institute Data Analytics Practice Committee.

ASSOCIATE PROFESSOR VASANT HIRANI

BSc (Hons) Nutrition, Leeds, MSc, Public Health Nutrition, London, Diploma in Dietetics, London, PhD, Lond.

Vasant Hirani is a CEPAR Associate Investigator, currently working at the Charles Perkins Centre, University of Sydney as an Associate Professor.

Her expertise lies in nutritional epidemiology, population health, nutrient status and the impact on health outcomes such as, frailty, sarcopenia, sarcopenic obesity, chronic disease and mental health. Her research encompasses topics on health and ageing such as investigating the impact of nutrient status on health outcomes which have been published in both national and international journals, including *Journals of Gerontology Series A: Biological Sciences and Medical Sciences, Nutrition Reviews, European Journal of Clinical Nutrition* and *The Journal of Nutrition*. She also co-authored and has been an Editor on the government commissioned reports on the annual Health Surveys in England and Scotland, for the UK Department of Health.

Vasant is an Accredited Practising Dietitian in Australia and is an Associate Editor for the *Journal of Human Nutrition and Dietetics*. She actively collaborates with colleagues based at national and international institutions.

ASSOCIATE PROFESSOR FIONA STANAWAY

MBBS (Hons), MPH, PhD

Fiona Stanaway is a CEPAR Associate Investigator based in the School of Public Health, University of Sydney.

Fiona is a clinical epidemiologist with research interests in ethnic inequalities in health and ageing. She has a particular interest in use of data linkage to better understand the relationship between ethnic diversity and health, including access to evidence-based health care. As a methodologist, she is also interested in approaches to understanding and overcoming biases in research into ethnic inequalities.

Fiona is also convenor of the Culturally and Linguistically Diverse Special Interest Group of the Australian Association of Gerontology.

DR RAMONA MEYRICKE

BSc (Hons) ANU, PhD Cantab

Ramona completed a postdoctoral fellowship at CEPAR and is now an Associate Investigator.

She is an actuary and applied researcher specialising in helping governments and organisation managing complex financial risks including longevity risk, broader changes linked to population ageing and climate change financial risks.

She obtained a PhD from the University of Cambridge in 2012 for work understanding interdependence in economic and financial markets and modelling financial contagion along supply chains and inter-sectoral linkages.

In her role with Taylor Fry, Ramona uses actuarial and analytic techniques to help decision makers make evidence-based, data-informed decisions that create better social, health and economic outcomes for their organisations and people.

DR JULIE AGNEW

BA (High Honors, Magna Cum Laude) William and Mary, PhD Boston College

Julie Agnew is a Professor located in the Finance Department at the Raymond A. Mason School of Business at William and Mary in the United States and CEPAR Associate Investigator.

Her research focuses on the psychology of investing. Her work examines the role financial literacy, information overload, trust and plan design play in financial decision-making.

She obtained her PhD from Boston College in 2001 for her essays on individual investor behavior in 401(k) plans. She frequently presents her research at conferences around the world and has testified as an invited expert witness to the U.S. Senate's Committee on Health Education, Labor and Pensions.

In addition to her research, she is a TIAA Fellow and serves on several advisory boards including the Pension Research Council Advisory Board of the Wharton School, the DCIIA Academic Advisory Council, and the RII Scholars Advisory Group.

ASSOCIATE PROFESSOR LORETTI I. DOBRESCU

BA (Hons) Nottingham Trent University, MSc West University of Timisoara, PhD University of Padua

Loretti I. Dobrescu is an Associate Professor in the School of Economics, UNSW Sydney. She is also an Associate Investigator in CEPAR where she collaborates with the Guiding Financial Decision Making team, and an editor of the *Journal of Pension Economics and Finance*.

Loretti's interests are in labour, public finance, health and applied econometrics. She has primarily focused her structural work on topics related to consumption and saving dynamics, as well as studying risk-taking and cognition via nonparametric partial identification methods.

She has published significantly in top international journals of economics and mathematical modelling and is generally active in the field of microeconometrics, with particular emphasis on the Economics of Ageing and Health Economics. Loretti was also part of the backbone team that developed the first comprehensive dataset of ageing in Europe – the Survey of Health, Ageing and Retirement in Europe.

THE AGEING ASIA RESEARCH HUB

RESEARCHERS

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JOHN BEARD
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The Ageing Asia Research Hub was funded by UNSW Business School in 2019 with a research focus on emerging economies in Asia, primarily China, Indonesia, Vietnam, and Thailand. In 2021, the Hub advanced research in three main streams: Healthy ageing, Resources and financial protection in retirement, and Aged care needs and services, and expanded work on new streams in Labour markets and societal ageing, and Demographics and their macroeconomic and fiscal implications. Given the intersection with other research streams of CEPAR, there is overlap between the work of the Hub and that of other streams.

Increasing life expectancy and rapidly declining fertility are generating unprecedented transformations in demographic structures across Asia. The scale and pace of demographic transition has increased concerns around rapid societal ageing in emerging Asia. By 2050, there is expected to be around 1.3 billion people aged 60+ in Asia, an increase of almost 700 million. The share of 'older elderly' aged 80+ will increase at an even faster rate. Ageing is also happening at a much earlier stage of development. An economic consequence is shrinking working age populations. Between 2020 and 2050, working age population share will shrink by 10 percent or more in China, Thailand, and Korea, and fall even in 'younger' countries such as Vietnam and Indonesia, with around 215 million fewer workers in East Asia alone by 2050. Navigating it requires policy adjustments on many fronts.

In this context, the Ageing Asia Research Hub aims to contribute to building the evidence base and analytical tools on societal ageing in emerging Asia, critically analyzing emerging policies and policy gaps, and behavioural responses to societal ageing. Hub researchers have active partnerships with researchers across East and Southeast Asia, with various government agencies, and with development agencies including World Bank and Asian Development Bank. During 2021, Hub researchers

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PHILIP (PIP) O'KEEFE
BA (Hons) and LLB Sydney, MSc Oxford, LLM London School of Economics
DIRECTOR OF HUB AND PROFESSOR OF PRACTICE

Pip O'Keefe is Professor of Practice at UNSW Business School and Director of the CEPAR Ageing Asia Research Hub.

He is a development economist who has worked across East, Southeast and South Asia and Europe and Central Asia on human development issues, in particular on social protection, labour markets, and ageing policy. Prior to joining CEPAR, he was Practice Manager for Social Protection and Jobs for the World Bank, where he worked from 1993-2021 with governments of around 20 developing countries on policy advisory, analytical work and investment lending in social sectors.

also maintained an active program of regional and global conference presentations and contributions to events with government counterparts.

In 2021, the Hub welcomed Professor Philip (Pip) O'Keefe as Hub Director. Prior to CEPAR, Pip worked from 1993-2021 at the World Bank, most recently as Practice Manager for Social Protection and Jobs for East Asia and Pacific.

To obtain full details of the outputs mentioned hereafter, please refer to the Research Outputs section found on pages 97-109.

Healthy Ageing

The healthy ageing stream focuses on building the evidence base and tools on factors that affect health and wellbeing for different groups of the Asian population as it ages. CEPAR researchers have continued to publish extensively under this stream. While China continues to be a major focus of work, the team has also been expanding its focus to other parts of emerging Asia. Research in this stream in the past year included:

John Beard, Katja Hanewald and Yafei Si in their article,' Intrinsic Capacity: Validation of a New WHO Concept for Healthy Ageing in a Longitudinal Chinese Study', examined and validated the structure of intrinsic capacity in a representative sample of the Chinese population aged 60 years and over, and assessed its value in predicting declining performance in IADLS and ADLs using China Health and Retirement Longitudinal Survey (CHARLS) data.

Bei Lu, Mi Hong, Guanggang Feng, John Piggott and Guy Mayraz, in their paper, 'The Impact of Cost-Sharing on Hospital Expenditure in China: A Regression Discontinuity Approach', used a dataset of seriously ill patients in China to analyse the impact of a change in co-pay ratio at retirement on inpatient expenditures. Decreases in co-pay ratio were found to lead to an increase in medical insurance spending with out of pocket (OOP) spending also increasing. Cost-sharing arrangements in China are also very sensitive to changes in co-pay ratio, an effect which appears to be magnified by significant medical saving account balances.

Qiqi Wang, Katja Hanewald and Xiaojun Wang in their paper, 'Multi-State Health Transition Modeling Using Neural Networks, proposed a model that combines a neural network with a generalised linear model (GLM) to estimate and predict health transition intensities. The paper introduced neural networks to health transition modeling to incorporate socioeconomic and lifestyle factors and allow for linear and nonlinear links between variables. The model was applied to data from the Chinese Longitudinal Healthy Longevity Survey from 1998 to 2018, and performs better in estimation and prediction than standalone GLM and neural network models. The paper provides new estimates of life expectancies for a range of population subgroups, and outlines a range of possible applications for further research.

Qian Lu, Katja Hanewald, and Xiaojun Wang, in their paper, 'Subnational Mortality Modelling: A Bayesian Hierarchical Model with Common Factors', propose a model in a Bayesian hierarchical framework to project mortality at both national and subnational levels based on sparse or missing data. They illustrate the model's use by drawing on a new database containing provincial-level mortality data for China from four censuses over 1982–2010. Using subnational data for 1999–2018 from US CDC, they also apply the model to the United States. The model predicts that, in 2030, China will have similar national life expectancy at age 60 and similar heterogeneity in subnational life expectancy as the US.

DR VASOONTARA YIENGPRUGSAWAN

BA Thammasat University, MA Maxwell School of Syracuse University, PhD ANU

SENIOR RESEARCH FELLOW

Dr Yiengprugsawan is a CEPAR Senior Research Fellow at UNSW Sydney. Her research focuses on life course determinants of health and wellbeing, risk factors relating to non-communicable diseases, and the role of primary health care and Universal Health Coverage (UHC) in developing Asia.

Vasoontara has been affiliated with CEPAR since 2014 and is investigating health-wealth dynamics in later life and long-term care policy in emerging economies (e.g., Indonesia, Thailand, and Vietnam). In 2020, she has prepared a case study for the Asian Development Bank Joint Ministers of Health and Finance Meeting on COVID-19 and UHC.

She previously led analyses for over a decade of the Thai Cohort Study (2005-14), held a fellowship from the World Health Organization's Asia-Pacific Observatory on Health Systems and Policies (2014-16), and coordinated the ARC Discovery Project on ageing, health and productivity in China and Australia (2016-19). Vas previously worked in policy and research at the United Nations International Organization for Migration and was awarded a PhD in 2009 from the Australian National University in epidemiology, economics, and population health.

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Vas Yiengprugsawan, John Piggott, Firman Witoelar, Fiona Blyth, and Robert Cumming in their paper, 'Pain and its Impact on Functional Health: 7-Year Longitudinal Findings among Middle-Aged and Older Adults in Indonesia', used Indonesian Family Life Survey (IFLS) data from 2007 and 2014 to investigate associations between changes in pain status and its impact on functional health outcomes among middle-aged and older adults. Severe pain was associated with older age, being female, lower education, and having chronic conditions or depressive symptoms. Findings have implications for public health policy, particularly in developing countries, in monitoring and management of pain, including related co-morbidities.

Quang Thai Trinh, Vas Yiengprugsawan, and Hal Kendig in their paper, 'Older People's Life Satisfaction, Health and Intergenerational Relationships in Vietnam', used data from Vietnam's National Ageing Survey 2011 to examine life satisfaction of Vietnamese people aged 60+ in relation to their health conditions and social relationships, including with adult children. While income, mobility and sleep had clear associations with life satisfaction, the most influential factor was affectual solidarity.

Resources and financial protection in retirement

While research on pension systems in emerging Asia remains a focus under this pillar, the Hub team is broadening their focus to include macroeconomic dimensions and alternative source of financial support in old age. Research under this stream in the past year included:

George Kudrna, John Piggott and Peter McDonald continued work on the ARC Linkage Project, 'Policy Modelling for Ageing In Emerging Economies: The Case of Indonesia' in collaboration with World Bank and the Indonesian Ministry of National Development Planning (Bappenas), to develop an overlapping generations (OLG) policy model incorporating the informal sector. This work has also informed an engagement with the Central Bank of Thailand to develop an OLG model which will also be shared with the Thai Treasury. An initial output has been the paper, 'Macro-Demographics and Ageing in Emerging Asia: The Case of Indonesia', which documents the economic and social circumstances of older people in Indonesia. Highlights were also presented at the, 'Asian Development Bank Regional Conference on Health and Socioeconomic Well-Being of Older Persons in Developing Asia', in September.

Yuanyuan Deng, Hanming Fang, Katja Hanewald and Shang Wu in their NBER Working Paper, 'Delay the Pension Age or Adjust the Pension Benefit? Implications for Labor Supply and Individual Welfare in China', develop and calibrate a life-cycle model of labor supply and consumption to quantify the implications of alternative pension reforms for labor supply, individual welfare, and government budget for China's basic old-age insurance program. They evaluate three potential pension reforms: (i) increasing pension eligibility age from 60 to 65, keeping the pension benefit rule unchanged; (ii) keeping pension age at 60, but proportionally lowering pension benefits so that the budget is the same as (i); and (iii) increasing pension age to 65 and simultaneously increasing pension benefits so that high and low skill individuals attain the same welfare levels as in the status quo. Both reforms (i) and (ii) can substantially improve pension system budgets, but at the cost of substantial individual welfare loss for both skill types. In contrast, reform (iii) can modestly improve pension system budgets while ensuring that both skill types are as well off as in the status quo. Reforms (i) and (ii) slightly increase and reform (iii) slightly decreases overall labor supply.

DR BEI LU
BA Tsinghua, MBA S. Aust., PhD UNSW
DIRECTOR OF HUB ENGAGEMENT AND SENIOR RESEARCH FELLOW

Bei Lu is a CEPAR Senior Research Fellow located at the UNSW Business School and a Research Fellow with Tsinghua University and Zhejiang University, China. She is Director of Engagement for the CEPAR Ageing Asia Research Hub, a member of the project team for 4.4 Retirement Policy Issues, and a collaborator on Project 3.3.

Bei returned to academia in 2002 to undertake a PhD in Economics at UNSW after working as an international trader for 12 years. Her research focuses on demographics, health, pensions and population ageing related social welfare and economic issues.

Bei has been successful in developing international linkages with organisations such as the provincial government of Zhejiang, China, the World Bank China as well as academic institutions. She also participated in a Chinese Key National Science Project from 2015-2019.

She has presented at a number of international conferences including the Stanford-Harvard Population Ageing Conference and the London School of Economics Long-Term Care Conference. Her research has appeared in the *China Economic Review, International Social Security Review,* the *Journal of the Economics of Aging, Population Review, CESifo Economic Studies* and the *Journal of Aging and Social Policy.*

George Kudrna, Philip O'Keefe and John Piggott in their paper, 'Pension Policy in Emerging Asian Economies with Population Ageing: What do we Know, Where Should we Go?' (Forthcoming in Bloom et al.), review the current state of knowledge about pension policy and its formulation in emerging economies in East and Southeast Asia. This region is characterised by increasing life expectancy, falling and /or low fertility ratios, immature social protection policy structures, high rates of informal employment, and in many cases, high rates of co-residency. These features point to the relevance of strands of research which do not normally sit together in thinking about the evidence base for pension policy formulation and its impacts, including fiscal implications; impacts on economic growth and intergenerational affordability; the relationship between alternative pension models and labour market (in)formality; the role of public benefits in the context of multi-generation households and intergenerational transfers; and the limitations of pension administration for older people who have worked in the informal sector.

Economy-wide effects of pension reforms are examined by George Kudrna, John Piggott and Phitawat Poonpolkul in their paper, 'Extending Pension Policy in Emerging Asia: A General Equilibrium Analysis for Indonesia'. The paper develops a stochastic OLG model with formal and informal labour. The benchmark model is calibrated to Indonesia for 2000-2019, with detailed representation of the labour market and government tax and pension policies. They simulate pension policy extensions targeted to formal workers as well as informal workers (non-contributory social pensions). They show that: (i) the first set of pension policy extensions (already being implemented) have positive effects on consumption, labour supply and welfare of formal workers; (ii) introduction of social pensions would generate large welfare gains for current informal elderly; and (iii) overall pension reforms lead to higher welfare across the employment-skill distribution.

Katja Hanewald, Ruo Jia, Zining Liu in their paper, 'Why is Inequality Higher Among the Old? Evidence from China', study income inequality in old age in China and its development over the life cycle using China Health and Nutrition Survey during 1991–2015. The paper shows that income is more unequally distributed in old age than in working age. It combines regression-based inequality decomposition and a three-step mediating effect test to analyse transmission of income inequality from initial socioeconomic differences to income

inequality in old age, finding that the urban-rural gap and educational inequality are primary causes of old-age income inequality, with the urban-rural gap partially mediated by educational inequality. Inequality accumulates with age and is reinforced in old age by the fragmented public pension system.

Wei Zheng, Youji Lyu, Ruo Jia and Katja Hanewald in their paper, 'The Impact of Expected Pensions on Consumption: Evidence from China', study how pension participation and expected pension benefits affect the consumption of working-age adults based on CHARLS for 2011–2015. They find that working-age adults covered by the Employees' Basic Pension, a compulsory formal sector public pension scheme, have a consumption rate that is 29.9 percentage points higher than those who do not participate in any public pension scheme. However, the Residents' Basic Pension, a low-benefit voluntary public pension scheme for other residents, only promotes consumption of working-age adults with low incomes. Focusing on pension participants, they find that if working-age adults' expected replacement rate increases by one percentage point, their consumption rate will increase by three percentage points, and the effect is stronger for working-age adults who are

DR GAOYUN (SOPHIE) YAN
BSc Econ. PhD UNSW
RESEARCH FELLOW

Sophie is a CEPAR Research Fellow based at the UNSW Business School. Her work before 2019 mainly contributed to the CEPAR research briefs and other policy briefs in wide-ranging topics, including relative poverty among the elderly, retirement incomes, pension systems, housing, and labour market for seniors.

Starting from early 2019, Sophie has been also affiliated with the UNSW Ageing Futures Institute. Her research studies people's behaviour in health economics and labour economics, with a focus on policy evaluation. Sophie's current work targets long-term care for the elderly in Australia and China.

older, poorer, or live in rural areas. Nondurable consumption is also more responsive to expected replacement rates than durable consumption. The findings suggest that pension expectations are critical to consumption decisions of working-age adults.

Aged Care Needs and Services

Demographic and social change in emerging Asia has triggered heightened interest in the potential role of formal aged care systems. While formal systems remain nascent in the region, policy action is accelerating. At the same time, market failures are present. This pillar includes research on trends in provision and attitudes towards different aged care arrangements; estimates of future demand for different care modes; and evaluation of policies and practices in emerging Asia that can facilitate supply of aged care. Recent research in this stream includes:

Vas Yiengprugsawan and John Piggott are editing a volume contracted to be published by Routledge on Long-Term Care in Emerging Asia. It synthesises lessons from case studies by researchers from China, Indonesia, Vietnam and Thailand. These are China's long-term care subnational financing pilots; development of aged care services building on health systems in Thailand and Indonesia, and the community-based model of Intergenerational Self-Help Clubs in Vietnam. The editors discuss implications for development of formal aged care systems in emerging Asia. Similarly, 'Aged Care in Emerging Asia: New demands, evolving responses and future directions' by Pip O'Keefe and Vas Yiengprugsawan in the forthcoming Handbook of Ageing, Health and Public Policy reviews aged care policies and practice across emerging Asian countries, addressing policy and institutional frameworks, eligibility and needs assessment, financing, and human resources.

Bei Lu, Gaoyun (Sophie) Yan, and co-authors in their paper, 'Substitutional Effect of Long-Term Care to Hospital Inpatient Care?' study the pioneering pilot program of formal aged care in Qingdao, China. The paper uses administrative data to assess the impact of the pilot from a cost and care use perspective. Regression discontinuity design (RDD) show that use of long-term care reduces the probability of using a hospital in-patient service by 12% with a reduction in costs for all stakeholders.

Vas Yiengprugsawan, Riana Rahmawati, Bob Cumming and John Piggott in their paper, 'Factors Relating to Depressive Symptoms of Caregivers for Older Care Recipients in Indonesia', use IFLS to investigate the relationships between care requirements for older care recipients and their household caregivers and identify factors related to depressive symptoms among caregivers. Factors associated with depressive symptoms among caregivers were not working, primary school education, living in rural areas, and having multiple older care recipients in the household. Having care recipients with medium or high functional limitations and not receiving household co-resident support were also associated with caregivers' depressive symptoms. To meet growing demand for care, screening and addressing factors relating to depressive symptoms could help mitigate adverse effects for caregivers.

Vas Yiengprugsawan, Bob Cumming and co-authors in their paper, 'Disparities in Outpatient and Inpatient Utilisation by Rural-Urban Areas Among Older Mongolians', based on a modified WHO-SAGE instrument, investigate patterns and determinants of health service use amongst older people in Mongolia. About 55 % of respondents used outpatient services in the past 12 months and 51 % used inpatient services in the past three years, with rural residents having longer travel times and more likely to incur out-of-pocket (OOP) expenditure. Women were also more likely to use

DR DANDAN YU
BEcon M Econ Peking, PhD UNSW
RESEARCH FELLOW

Dandan Yu is a CEPAR Research Fellow located in the UNSW Business School.

She has a PhD in Economics from UNSW. Her PhD thesis studies the sharing of resources within the family. Before starting her PhD, she obtained a Bachelor's and a Master's degree in Economics from Peking University. Dandan's main research interests lie in health decisions and social involvement in later life. She also has expertise in econometric modelling and STATA programming. Her current research focuses on health behaviours and social activities for seniors in China.

outpatient services. Compared to apartment residents in urban areas, informal settlement residents in urban areas were less likely to use outpatient services. The study highlights the need to address disparities in outpatient service use for rural and urban ger populations, including reorienting health services towards prevention and primary care management of non-communicable diseases (NCDs).

Labour markets and societal ageing in Asia

This is an expanding area of work for the Hub, including gender and labor markets; interactions of work, social security, care and health systems for productive and health ageing; technology, labor markets and ageing. Recent research in this area includes:

The volume *Women, Work and Care in the Asia-Pacific,* edited by Marian Baird, Michele Ford, and Elizabeth Hill, provides a comparative analysis of the social, economic, industrial and migration dynamics that structure women's paid work and unpaid care work experience in Asia-Pacific region. Each country chapter examines formal and informal ways in which work and care are managed, the changing institutional landscape, gender relations and fertility concerns, employer and trade union responses,

and challenges policy makers face and consequences of their decisions for working women. By covering the entire region, including Australia and New Zealand, the book highlights how different national work and care regimes are linked through migration, with wealthier countries looking to poorer neighbours for alternative sources of labour. In addition, the book contributes to debates about barriers to women's workforce participation, valuation of unpaid care, gender wage gaps, social protection and labour regulation for migrant workers, and gender relations in developing Asia. Marian and co-editors are working on a follow-up book titled Working Women in Asia-Pacific: Challenges and Ways Forward, which will focus on impacts of technological change, globalisation, demographic change, and sustainability on women's work across Asia-Pacific.

Pip O'Keefe, John Giles, and Yang Huang in their paper, 'Ageing, Work and Retirement in China, East and Southeast Asia', use household data from China, Indonesia, Thailand, Vietnam, Korea and Japan to explore the dynamics of mature labour force participation and retirement behaviour, highlighting divergences across formal and informal sectors, gender, education, and social security arrangements. Across emerging Asia,

labour income remains the dominant source of elderly income, in part due to underdeveloped social protection systems. Drivers of work and retirement behaviour include health status, access to pensions, care responsibilities and retirement decisions of spouses. The paper also discusses public policies to extend productive working lives, including extending pension coverage, removing barriers to longer work, building formal care systems, strengthening lifelong learning, and addressing societal attitudes.

Rafal Chomik and John Piggott in their paper, 'Population Ageing, Productivity and Technological Change in Asia', explore the intersection of demographic and technological change in Asia. While these phenomena have been extensively researched, the study of interactions between them is often incidental and rarely carried out in Asia. This paper explores the plausible channels of interactions and assembles evidence of links between age and productivity at individual, firm and country levels, drawn from both Asian and global evidence. The authors identify many knowledge gaps, both in data and modelling, which need to be addressed to inform the major policy interventions required to manage these dual transitions.

DR YUANYUAN DENG
MA PhD SUNY-SB
SENIOR RESEARCH ASSOCIATE

Yuanyuan Deng is a CEPAR Senior Research Associate. She is an applied microeconomist with broad empirical interests focusing on Health Economics, Public Economics, and Labor Economics. Her research has been supported by the Michigan Retirement and Disability Research Center (MRDRC) and the Center for Retirement Research (CRR) at Boston College.

Yuanyuan is currently working on issues related to the gender effect on long-term care in China, the first-interview effect related to the recovery from mobility limitations among older Americans, and the intergenerational effect of depression on children's life outcomes. She is also working on projects

investigating the relationship between measures of labor supply flexibility and portfolio-choice decisions.

Yuanyuan received her Ph.D. in Economics from the State University of New York-Stony Brook in 2016. Before joining CEPAR, she held positions at Singapore Management University.

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OTHER INVESTIGATORS INVOLVED IN THE HUB IN 2021 INCLUDED:

DR KATJA HANEWALD

MSc Econ PhD Humboldt-Universität zu Berlin

Director of Hub Research and Associate Investigator

Katja Hanewald is a Senior Lecturer in the School of Risk and Actuarial Studies and the Coordinator of the Actuarial Co-op Program at UNSW Sydney. She is also the Director of Research of the Ageing Asia Research Hub, which is hosted by the ARC Centre of Excellence in Population Ageing Research (CEPAR). Her research addresses risk management and insurance responses to population ageing. Katja has published in all leading international insurance and actuarial journals (including the *Journal of Risk and Insurance, Insurance: Mathematics and Economics* and the *ASTIN Bulletin*) and several major economics journals (including the *Journal of Economic Behavior & Organization*). Her current research investigates optimal retirement financial decisions of older households and the design of retirement financial products such as reverse mortgages, long-term care insurance, and annuities. She teaches risk management courses.

PROFESSOR JOHN BEARD

MBBS Adel.,PhD USyd

John Beard is a Professor at CEPAR in the UNSW Business School. In this role, he shapes the development and growth of the Centre's research program, especially projects focused on Asia.

He is also currently a Commissioner with the US National Academy of Medicine's Commission on Healthy Longevity and Chief Adviser to the European Institute of Innovation and Technology (EIT) Health.

John Beard is a former Director of WHO's Department of Ageing and Life Course, a position he held from 2009 to 2018. During his time at WHO he was also the Director of the Department of Gender, Women and Health from 2010 to 2012. He was a lead writer and editor of the first WHO World Report on Ageing and Health (2015), and oversaw the development of the Global strategy and action plan on ageing and health, adopted by WHO Member States in May 2016.

In 2010, he launched the Global Network of Age-friendly Cities and Communities. John Beard worked closely with the World Economic Forum, is a past chair of their Global Agenda Council on Ageing and a past member of the Global Council on the Future of Human Enhancement.

PROFESSOR HANMING FANG

BA Fudan, MA Virginia, PhD Pennsylvania

Hanming Fang is Joseph M. Cohen Term Professor of Economics at the University of Pennsylvania and a Research Associate at the National Bureau of Economic Research, where he served as the Acting Director of the Chinese Economy Working Group from 2014-2016. He is also a Research Associate of the Population Aging Research Center, a Senior Fellow at the Leonard Davis Institute of Health Economics, and an Executive Committee Member of the Center for the Study of Contemporary China, all at the University of Pennsylvania. In addition, he is a Senior Fellow of the Asian Bureau of Economic and Finance Research in Singapore.

He is an applied microeconomist with broad theoretical and empirical interests focusing on public economics. His current work focuses on issues related to insurance markets, particularly the interaction between health insurance reform and the labour market. He also studies the Chinese economy, particularly in relation to population ageing and social security.

He has been a co-editor for leading economics journals and was elected as a Fellow of the Econometric Society in 2018.

Before joining the Penn faculty, he held positions at Yale University and Duke University.

RESEARCH TRAINING AND MENTORING

THE CEPAR RESEARCH ENVIRONMENT IS UNIQUE GLOBALLY IN ENCOURAGING RESEARCHERS AT ALL CAREER STAGES TO DRAW ON DEEP KNOWLEDGE OF THEIR OWN DISCIPLINES WHILE ENGAGING WITH COLLEAGUES FROM DIFFERENT COGNATE BACKGROUNDS.

CEPAR offers a range of initiatives designed to enhance the experience of researchers in the Centre's four targeted groups: mid-career (MCR), early career (ECR), PhD students, and undergraduates. These initiatives are aimed at developing researchers not only affiliated with CEPAR but also those affiliated with other national, and in some cases international, groups focused on the issue. In this way, CEPAR plans to play a key role in national capacity building and networking, with the aim of driving impact in the field of population ageing in the longer term.

CENTRE-WIDE EVENTS

In addition to the initiatives targeted at specific cohorts outlined below, CEPAR also provided formal opportunities for the Centre's mid-career and emerging researchers to come together with senior researchers. A virtual cross-nodal seminar series provided opportunities for emerging researchers to share their work with their colleagues, garner different perspectives, and explore opportunities for collaboration. Each of the presentations in 2021 were well-attended and feedback was extremely positive.

CEPAR's annual workshop provided an opportunity for our researchers and students to gain an in-depth understanding of the entire CEPAR research program, including progress-to-date and future research directions. Usually held as an in-person workshop, due to state border closures the 2021 was held virtually, with personnel

convening for a two-day online event in November. The event included virtual poster presentation sessions designed to showcase the work of our emerging and mid-career researchers.

EARLY AND MID-CAREER RESEARCHER MENTORING AND TRAINING

ECRs and MCRs are mentored by CEPAR senior researchers and have opportunities to interact with experts within the five collaborating universities, as well as more broadly through CEPAR's extensive networks. CEPAR ECRs and MCRs participate in Centre activities such as workshops and seminars, serve on CEPAR subcommittees and Stakeholder Reference Groups, contribute to the Centre's working paper series, and have opportunities to develop a range of skills.

CEPAR MENTORING SCHEME

The formal CEPAR Mentoring Scheme, launched in 2018, matches senior researchers with ECRs and MCRs to support the professional and personal growth of the mentees.

The program supports the development of leadership and relationship skills which mentees will require to go on to independently establish and manage large, complex multidisciplinary projects that are firmly engaged with national and international partners in academe, government and industry.

Mentees may use the scheme to seek advice on career and goal planning; work/life balance; the development of skills and leadership capabilities; publication or grant application strategies; or strategies for engaging with or translating research for stakeholders and/or the media. Networking or other opportunities may also be facilitated through the mentor's connections.

The Scheme also enhances connection and collaboration within and across nodes as well as with other institutions where our mentors are based.

In 2021, under the guidance of CI Marian Baird, Director of Mentoring (Emerging Researchers), the centre undertook a review of the mentoring scheme to identify where improvements could be made. A survey of both the previous mentors and mentees was undertaken by CEPAR PhD Student Lisa Gulesserian and the findings allowed for appropriate changes to the guidelines and program to be made. The improved mentoring scheme was relaunched with a group introduction session held on November 25 that included participation from the new group of mentors and mentees participating in the program.

FUTURE LEADERS IN AGEING PROGRAM

This program aims to develop the skills of CEPAR's mid-career researchers, providing them with experience and training to support the next steps in their careers. Offered for the first time in 2019, the program was developed by CIs Sharon Parker and Marian Baird with the facilitation of the program and its preceding activities and exercises carried out by Denise Weinreis, who specialises in coaching for leadership and teamwork. In 2021, a series of regular virtual meetings was convened by Weinreis, to provide opportunities for participants to further develop their skills. The focus was on seeking opportunities for leadership within the participants' own individual workplaces.

In 2021, an expression of interest for a second group of Future Leaders was circulated with the new cohort meeting with Weinreis to discuss their development requirements. These requirements are being developed by Denise in consultation with CIs Parker and Baird, with the new cohort commencing online meetings in 2022 and the view to holding an in-person event later in the year.

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RESEARCH TRAINING AND MENTORING

EARLY CAREER RESEARCHER METHODOLOGY WORKSHOP

A training workshop, 'The case study approach: From theory to practice' was hosted online by the CEPAR University of Sydney node in September 2021. It was convened by CEPAR CI Marian Baird and presented by Associate Professor Catherine Welch and CEPAR Principal Research Fellow Associate Professor Myra Hamilton, both based at the University of Sydney.

The course, which was attended by thirty-two participants, explored what a case study approach is, when researchers might consider undertaking a case study approach, and how a case study approach might be used. It considered different types of case studies, including mixed-method case studies, and options for case study design. It also explored the question 'how do you know a good piece of case research when you see one?'.

NATIONAL AND INTERNATIONAL NETWORKING OPPORTUNITIES

Over the years CEPAR has invested significant resources in creating opportunities for emerging researchers to develop their international networks and communicate the results of their research to international peers. COVID-19 border restrictions prevented researchers from taking advantage of the formal funding schemes designed to support these interactions this year, although students and fellows did have the opportunity to present their research at virtual conferences and meetings. In 2022 as border restrictions loosen, CEPAR will again open the funding schemes to support these important networking opportunities.

TRANG LE
CEPAR PhD student
UNSW SYDNEY

'The 29th Colloquium on Pensions and Retirement Research is a great event. The Colloquium is a unique forum balancing academic research, industrial applications, and policy implications. Packed with the most up-to-date knowledge, the event has successfully affirmed itself as one of the most desirable conferences in Australia for academia, government, and industry to discuss pensions and retirement research.

As a PhD candidate, I was proud to be a part of the event with my presentation on "Fertility, Human Capital and Intergenerational Transfers in Developing Countries". I received valuable feedback from some of the most influential scholars in the field, which has inspired me to improve my research. In this regard, I find the Colloquium to be an excellent platform for young researchers to learn from experts in the field.'

The Centre's visitors' program, which normally also provides students, ECRs and MCRs with opportunities to expand their international networks, was also severely impacted by continued border restrictions in 2021. It also affected the ability to host visiting ECRs and PhD students from institutions with which CEPAR is building a collaborative research program. As a result, the Centre was only able to host one visiting PhD student in 2021 who arrived before border restrictions were imposed.

QIQI WANG
Visiting PhD Student from School of Statistics, Renmin University, China
1 January – 16 August 2021
UNSW SYDNEY

'CEPAR is a great place to gain research experience. It offers me opportunities to participate in research events and get acquainted with leading researchers.

I have visited CEPAR at the UNSW Sydney node since 2019 as a PhD student as part of the UNSW Study Abroad Research Practicum Program under the supervision of CEPAR Associate Investigator Katja Hanewald. During my visit, we completed the joint project "Multi-State Health Transition Modeling Using Neural Networks". We are working on a project on multi-population mortality modelling using neural networks.

CEPAR helps and motivates me to be devoted to ageing research. The researchers and their enthusiasm here inspire me to explore the solutions to world ageing issues.'

HIGHER DEGREE RESEARCH TRAINING

60 HDR students were enrolled under the supervision of CEPAR Investigators and working on topics aligned with the Centre's research agenda in 2021. Details of their research theses are provided on pages 81-84. These students have the opportunity to participate in a range of Centre activities, including conferences and workshops and meetings with international visitors.

The Centre contributes to the development of national research capacity more generally through support for the Emerging Researchers in Ageing (ERA), an initiative which aims to bring together students interested in ageing research and provide them with opportunities to form networks and undertake collaborative endeavours. In 2021, ERA membership continued to grow, with over 975 registered members, primarily graduate students drawn from a wide range of disciplines and also key professionals, industry stakeholders, and representatives from peak bodies in the ageing field keen to play a role in supporting emerging researchers.

CEPAR's funding support allows the ERA administrative team to coordinate educational and mentoring activities for research students and early career researchers in the ageing field. The key annual ERA activity is the ERA National Conference, now in its 19th year. Due the ongoing impact of COVID-19, for the first time in its history, the conference was held online, hosted as a live, interactive virtual event. The 'ERA 2021' conference (4 November), with the theme 'Survive and Thrive', was co-chaired by CEPAR Associate Investigator, Professor Julie Byles, from the University of Newcastle and Dr Rachel Winterton from La Trobe University, and additionally supported by a national network of 14 conference Ambassadors from across the country.

The conference featured 37 oral presentations and 5 'Ask the ERA Brains Trust' presentations (a new presentation format option, that provided presenters with the opportunity to get answers to their research questions from relevant experts); presentations addressed various aspects of ageing, including ageing interventions, care transitions, clinical care practices, cognitive health, contexts of care, dementia care, determinants of ageing, markers of ageing, participation, physical activity and falls prevention, and predicting health outcomes. The conference concluded with an interactive 'Research Journey Game', developed and hosted by Professor Julie Byles, that provided an opportunity for participants to explore the promises and potential pitfalls of graduate research in a fun and engaging manner.

Given the online nature of the conference, it was pleasing to note that attendance and engagement remained very strong throughout the day. Feedback from conference participants was primarily positive, with aspects of the virtual format welcomed by some, notably increased accessibility. However, while attendees recognised the impossibility of an in-person event, some lamented the 'ease of opportunity to network', though were appreciative of the live virtual format and interactive structure in offering opportunities to directly connect with the ageing research community as much as possible given the circumstances.

In addition to the ERA 2021 conference, with the support of CEPAR, a portion of the ERA funds which would have been devoted to hosting an in-person conference was utilised to support emerging researchers to participate in the 54th Australian Association of Gerontology (AAG) conference, 'Innovation in Ageing: For the Future' (initially planned as an in-person conference, and ultimately hosted as a digital event due to travel restrictions). As the *Early Career Partner* of the AAG 2021 conference, ERA offered $100 bursaries to support emerging researchers to attend the AAG 2021 conference. Thirty-seven eligible students and early career researchers were awarded an ERA bursary to subsidise conference registration.

ERA also partnered with the AAG Student and Early Career Group (SECG) to co-host an AAG 2021 pre-conference workshop:

- 5 November: *Know and show what you are worth – Measuring and demonstrating your impact*, presented by Dr Narelle Tunstall and Hugh Kearns (111 registered participants)

With the support of ERA's conference sponsorship, this workshop was made available at no-cost to students and early career researchers participating in the AAG 2021 conference, in addition to members of either AAG or ERA not otherwise participating in the conference. The registration for this pre-conference workshop greatly exceeded the usual attendance of similar in-person events held previously, which highlights a benefit of online sessions in terms of increased participation.

The continued and enhanced collaboration between ERA and the AAG in 2021 also enabled ERA members to attend three additional AAG events throughout the year at no-cost:

- 5 May (AAG SECG webinar): *Building connections with older people and aged care service providers for research recruitment and collaboration*, presented by Dr Claudia Meyer from the Bolton Clarke Research Institute and Dr Jed Montayre from Western Sydney University
- 7 September (AAG SECG and New Zealand Association of Gerontology (NZAG) webinar): *Time to take action: Dealing with imposter syndrome*, presented by A/Prof Andy Towers from Massey University, Dr Kim van Schooten

RESEARCH TRAINING AND MENTORING

from Torrens University, and Dr Meredith Perry from the University of Otago

- 5 November (AAG 2021 pre-conference workshop): *Publish before you perish: Writing for scholarly journals*: *How to 'get published'*, hosted by the *Australasian Journal on Ageing (AJA)* and presented by Dr Jane Sims and Dr Jed Montayre.

ERA also collaborated with the AAG SECG to co-host our regular joint webinar. The selected topic was *Taking your research interests beyond your PhD in building a career* (28 July), presented by Dr Elissa Burton from Curtin University, A/Prof Danijela Gnijidic from the University of Sydney, and Dr Maria Shialis from the City of Onkaparinga, and facilitated by Dr Joanne Flavel from Flinders University and Dr Matthew Carroll from Monash University. The three presenters shared their knowledge and experience on how to develop a career post-PhD in the field of ageing, including discussion of various career pathways for post-doctoral researchers, and key strategies for developing a career in different sectors, including how to build connections with academia, industry, and government. The session was well-attended, with 131 registered participants.

CEPAR's funding also supports the annual *ERA Travel Exchange Program* which makes funding available for up to one international and two national exchanges, enabling emerging researchers in ageing to connect with academic experts in their field. Unfortunately, the 2021 round of the Travel Exchange Program was again deferred due to ongoing COVID-19 travel restrictions. The funding will be put towards additional exchanges in the next round, which is anticipated to be offered in 2022 (for 2023 travel).

The impact of COVID-19 has presented many challenges for researchers in ageing, and ERA recognises that students and early career researchers may be particularly impacted by the ongoing effects of the pandemic. However, with the collaborative support of CEPAR, ERA was able

to continue to support emerging researchers in ageing through a variety of virtual activities. In particular, with offering a virtual ERA conference, and with continued investment in the AAG 2021 conference, ERA has further strengthened its long-standing collaboration with the AAG, enabling ERA to continue to facilitate educational and networking activities for research students and early career researchers in the ageing field across Australia, despite the challenges presented by the ongoing pandemic.

UNDERGRADUATE STUDENT ENGAGEMENT

SUMMER SCHOLARSHIP PROGRAM
The CEPAR Summer Scholarship Program is now in its sixth year. The program provides successful applicants with the opportunity to work under the supervision of CEPAR Research Fellows for up to an eight-week period over the summer break. The program generated a great deal of interest from undergraduate students in relevant disciplines who competed for eight awards. The successful students and their research projects were:

Jeremy Aggio
Actuarial Modelling Health Status and Functional Disability in Australia

Laura Bennett
Task and Relationship Cooperation among Age Diverse Employees: A Social Comparison Lens

Jovana Kolar
Modelling Systematic Mortality Risk with Affine Models

Chudi (Jennifer) Lin
Long-term Care Insurance, Financial Support and Labor Supply: New Evidence from China

Kalen Peterson
The Intergenerational Consequences of Depression: A Cross-country Comparison

Peta Ranieri
Designing Recruitment and Selection Materials to Reduce Age Bias in Hiring Processes

Tabitha Thomas
Social Environment and Biomarkers of Ageing in Different Ageing Cohorts

Yutong Zheng
China's Demographic Change and External Balances

The program is designed to provide students with a taste of working in a research centre and inspire them to pursue research studies.

JOVANA KOLAR
CEPAR Summer
Scholarship Recipient
UNSW SYDNEY

'My experience as a CEPAR Summer Research Scholar involved working on an affine mortality modelling project. The focus was on implementing survival models in R that account for random jumps in mortality. The experience was challenging, yet fulfilling, allowing me to apply and expand on the skills learnt during my university studies. I particularly enjoyed the steep learning curve that came with understanding the rich mathematical framework behind survival modelling. The opportunity to learn from my supervisors Michael Sherris and Len Garces was invaluable and of immense help. This experience has shown me the beauty of research and I am grateful to have had this opportunity with CEPAR.'

CEPAR RESEARCH STUDENTS

CEPAR affiliated students work under the supervision of CEPAR Investigators on topics aligned with the Centre's research agenda. In 2021 a total of 53 PhD students and four Honours students were affiliated with the Centre.

PHD COMPLETIONS
This year 7 PhD CEPAR affiliates submitted their theses for examination and/or graduated:

DANIEL DINALE
Thesis:	Institutional interdependency: explaining the relationship between female labour force participation and fertility rates in post-industrial nations
Supervisor:	Professor Marian Baird
Co-supervisor:	Dr Chris F Wright

DOROTHY DUDLEY
Thesis:	Understanding personal goals in retirement and their relationship with life satisfaction: An Australian perspective
Supervisor:	A/Professor Kate O'Loughlin
Co-supervisors:	Drs Vanessa Loh and Sophie Lewis

MIGUEL ALBERTO LORCA ESPINOZA
Thesis:	Three essays in labour economics
Supervisor:	A/Professor Isabella Dobrescu

TIN LONG HO
Thesis:	The role of housing wealth in financial planning for retirement.
Supervisors:	Professor Hazel Bateman and Dr Katja Hanewald
Co-supervisor:	Professor Hanming Fang

MITCHELL MCMASTER
Thesis	Cognitive decline: a window of opportunity for reducing the risk of dementia?
Supervisor:	Professor Kaarin Anstey
Co-supervisors:	Professor Linda Clare, Dr Sarang Kim and A/Professor Nicolas Cherbuin

DINBERU SHEBESHI
Thesis:	Modelling the incidence of admission of older women to hospital, and the impact of comorbidity and frailty on hospital use
Supervisor:	Professor Julie Byles
Co-supervisor:	Dr Xenia Dolja-Gore

CHENG WAN
Thesis:	Three essays on retirement insurance in China
Supervisor:	Professor Hazel Bateman
Co-supervisors:	Dr Katja Hanewald and Professor Hanming Fang

PHD STUDENTS
In addition to those who submitted their PhD theses in 2021, the students listed below were also affiliated with CEPAR:

JESSICA AMOS
Thesis:	Multi-domain web and app-based intervention for people with mild cognitive impairment and subjective cognitive decline to support cognitive resilience and reduce dementia risk
Supervisor:	Professor Kaarin Anstey

ROBERT ANNABEL
Thesis:	Company-level GHG emissions and institutional investors' active ownership
Supervisor:	Professor Hazel Bateman
Co-supervisors:	Professor Arghya Ghosh, A/Professor Scott Donald and Adjunct A/Professor Anthony Asher

TSENDSUREN BATSUURI
Thesis:	Economic and environmental implications of an asymmetric global demographic transition
Supervisor:	Professor Warwick McKibbin
Co-supervisors:	Professor Creina Day and Dr Larry Liu

NUR CAHYADI
Thesis:	Health, long-term care and unmet needs: In search of sustainable support for older people in Indonesia
Supervisor:	Dr Collin Payne
Co-supervisors:	Dr Brian Houle and Dr Firman Kartaadipoetra

HOANG (VICTORIA) NGUYEN BANG CHAU
Thesis:	Better communication to solve the under-saving, under-spending puzzle
Supervisor:	Professor Susan Thorp
Co-supervisor:	A/Professor Jingyu Yang

MENGXUE CHEN
Thesis:	Health inequalities in China with its rapid demographic and socioeconomic changes
Supervisor:	Professor Zhongwei Zhao
Co-supervisors:	A/Professor Vladimir Canudas-Romo and Dr Adrian Hayes

RESEARCH TRAINING AND MENTORING

SHU CHEN
Thesis:	Ageing and health in China: Burden, long-term care services use and cost
Supervisor:	Dr Katja Hanewald
Co-supervisors:	Professors Bingqin Li and Hazel Bateman

SOL CHUNG
Thesis:	Mortgage choice behaviour and the effects of natural disasters on consumption and investment behaviour
Supervisor:	Professor Susan Thorp
Co-supervisor:	Dr Michael Shin

MARK COOPER-STANBURY
Thesis:	Equity for our elderly: the supply and demand factors associated with equitable access to residential aged care
Supervisor:	A/Professor Jeromey Temple
Co-supervisor:	Professor Briony Dow

NICOLE EE
Thesis:	The impact of social engagement on cognitive health and wellbeing in older adulthood: An investigation of barriers, enablers and mechanisms
Supervisors:	Professor Kaarin Anstey and Dr Ruth Peters
Co-supervisor:	Dr Fiona Matthews

AREZOO FATHIEH
Thesis:	Financing the Long-Term Care
Supervisor:	Dr Katja Hanewald
Co-supervisor:	Professor Hazel Bateman

ROSHEN FERNANDO
Thesis:	Macroeconomic consequences of COVID-19, climate change and antimicrobial resistance
Supervisor:	Professor Warwick McKibbin
Co-supervisors:	Dr Larry Liu and Professor Renee McKibbin

LISA GULESSERIAN
Thesis:	Uber fathers, flexible work and gender roles
Supervisor:	Professor Marian Baird
Co-supervisor:	Dr Alex Veen

MITIKU HAMBISA
Thesis:	Assessment of healthy ageing in the 1921-26 birth cohort of the Australian Longitudinal Study on Women's Health (ALSWH): Using driving as operational indicator of ageing well
Supervisor:	Professor Julie Byles
Co-supervisor:	Dr Xenia Dolja-Gore

ALEXANDRA HERRON
Thesis:	The conundrum of informal eldercare for worker-carers and their workplaces
Supervisor:	Professor Marian Baird
Co-supervisor:	Professor Leanne Cutcher

ALIZA HUNT
Thesis:	Meaning behind the metric: Understanding mental health in two samples of older rural Indonesians
Supervisors:	Professors Zachary Steel, Phil Batterham and Peter McDonald
Co-supervisor:	Dr Steve McEachern

HOÀNG THỊ NHẬT HUYỀN
Thesis:	Modelling pension reform and informality in emerging economies: The case of Vietnam
Supervisors:	Professor John Piggott, Dr George Kudrna and A/Professor Loretti I. Dobrescu

KERRY HWANG
Thesis:	Ageing of older migrant Australians: An analysis harnessing population level datasets
Supervisor:	A/Professor Jeromey Temple
Co-supervisors:	A/Professors Bianca Brijnath and Dina LoGiudice

LUCINDA ILES
Thesis:	An investigation into leadership behaviour in age diversity
Supervisor:	Dr Daniela Andrei
Co-supervisor:	Professor Sharon Parker

DOREEN KABUCHE
Thesis:	Longevity risk: Retirement income product innovation and risk management strategies
Supervisor:	Professor Michael Sherris
Co-supervisors:	A/Professor Jonathan Ziveyi and Dr Andrés Villegas

MILENA KATZ
Thesis:	Ageing, diet and inflammation: An Australian perspective
Supervisors:	A/Professor Ruth Peters and Dr Adrienne Withall
Co-supervisor:	Professor Emad El-Omar

SALVATORY KESSY
Thesis:	Longevity risk models and actuarial applications with data analytics techniques
Supervisor:	Professor Michael Sherris
Co-supervisors:	Dr Andrés Villegas and A/Professor Jonathan Ziveyi

LILIPRAMAWANTY KEWOK LIWIN
Thesis:	Morbidity and mortality related to type 2 diabetes in Indonesia: Understanding the role of demographic changes
Supervisors:	Dr Collin Payne
Co-supervisors:	A/Professors Brian Houle and Vladimir Canudas Romo and Dr Matthew Kelly

TRANG LE
Thesis:	Essays on fertility choice, human capital and intergenerational transfers in developing countries
Supervisors:	Professor John Piggott and Dr George Kudrna

EBONY LEWIS
Thesis:	Frailty and cognition across the adult life course
Supervisors:	A/Professor Ruth Peters and Professor Kaarin Anstey
Co-supervisor:	Professor Kenneth Rockwood

YULONG LI
Thesis:	Health status, mortality heterogeneity and implications for post-retirement product innovation
Supervisors:	Professor Michael Sherris and A/Professor Jonathan Ziveyi
Co-supervisor:	Dr Andrés Villegas

JAMES LIAN
Thesis:	The impact of childhood adversity on late-life psychopathology
Supervisor:	Professor Kaarin Anstey
Co-supervisor:	Dr Kim Kiely

QIAN LU
Thesis:	Research on the sub-regional mortality modelling in a Bayesian hierarchical framework
Supervisor:	Dr Katja Hanewald
Co-supervisor:	Professor Xiaojun Wang

REBECCA LUONG
Thesis:	Cardiometabolic health outcomes, frailty, dietary patterns and more plant-based diets
Supervisor:	A/Professor Vasant Hirani

LINGFENG LYU
Thesis:	Forecasting and financing healthy aging and aged care in Australia
Supervisors:	A/Professor Yang Shen and A/Professor Jonathan Ziveyi

SUE MARKHAM
Thesis:	Facilitators and barriers to clinical trial recruitment and retention of older people: A mixed methods study
Supervisor:	A/Professor Kate O'Loughlin
Co-supervisors:	A/Professor Lindy Clemson and Dr Justin McNab

CATHY MONRO
Thesis:	Impact of aged care reforms on governance, operations, clients and families of residential aged care: A qualitative study
Supervisor:	A/Professor Kate O'Loughlin
Co-supervisors:	A/Professor Lynette Mackenzie and Dr Sanetta Du Toit

THI MINH HANG NGUYEN
Thesis:	Machine learning tools for variable annuity portfolio management
Supervisor:	A/Professor Jonathan Ziveyi
Co-supervisors:	Dr Andrés Villegas and Professor Michael Sherris

MAATHUMAI RANJAN
Thesis:	The impact of government support schemes on autism spectrum disorder (ASD) prevalence in Australia.
Supervisors:	Professor Bernard Wong and Dr Katja Hanewald
Co-supervisor:	Professor Michael Sherris

JAMES MAHMUD RICE
Thesis:	Extensions to the Australian National Transfer Accounts
Supervisor:	A/Professor Jeromey Temple
Co-supervisor:	Professor Peter McDonald

DAVID RODGERS
Thesis:	Demographic change and optimal policy responses
Supervisor:	Professor Alan Woodland
Co-supervisor:	Dr George Kudrna

YAFEI SI
Thesis:	Three essays on health, health care, and healthy ageing
Supervisor:	Dr Katja Hanewald
Co-supervisors:	Professors Bingqin Li and Hazel Bateman

MICHELLE VHUDZIJENA
Thesis:	An investigation of heterogeneity in mortality, functional disability and morbidity risks using longitudinal individual level data
Supervisors:	Professor Michael Sherris and Dr Andrés Villegas
Co-supervisor:	A/Professor Jonathan Ziveyi

YAWEI WANG
Thesis:	Innovative combo product design embedding variable annuity and long-term care insurance contracts
Supervisors:	A/Professor Yang Shen and A/Professor Jonathan Ziveyi
Co-supervisor:	Professor Michael Sherris

DANIEL WHEADON
Thesis:	Essays on pension policies and temptation preferences
Supervisor:	Professor Alan Woodland
Co-supervisors:	Dr George Kudrna, Dr Gonzalo Castex

YUCHEN XIE
Thesis:	Navigating aged care services for older Australians and their families
Supervisor:	Professor Kaarin Anstey
Co-supervisors:	A/Professor Myra Hamilton, Professor Carmelle Peisah and Dr Craig Sinclair

XINGYING YU
Thesis:	Age-dependent multi-cohort affine mortality model and mutual mortality pooling products
Supervisor:	Professor Michael Sherris
Co-supervisors:	A/Professor Yang Shen and A/Professor Jonathan Ziveyi

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RESEARCH TRAINING AND MENTORING

EVA ZELLMAN
Thesis:	The role of leadership in managing an ageing and age diverse workforce
Supervisor:	Dr Daniela Andrei
Co-supervisor:	Professor Sharon Parker

WEIHONG ZHANG
Thesis:	Gait, cognition and falls - from theory to practice
Supervisor:	Professor Lee-Fay Low
Co-supervisors:	Professor Lindy Clemson and Dr Josephine Gwynn

SHALLY ZHOU
Thesis:	Technology, life space, and healthy cognitive ageing
Supervisor:	Professor Kaarin Anstey

YUXIN ZHOU
Thesis:	Age-dependent multi-cohort affine mortality model and mutual mortality pooling products
Supervisors:	Professor Michael Sherris and A/Professor Yang Shen
Co-supervisor:	A/Professor Jonathan Ziveyi

HONOURS STUDENTS

In 2021 the following Honours students were affiliated with CEPAR:

KIARNA ROSANDIC
Thesis:	Time-varying risk aversion and investment switching: evidence from an Australian superannuation fund
Supervisors:	Dr Junhao Liu and Professor Susan Thorp

ELLORA SHIRODKAR
Thesis:	Assessing sustainable aged care financing in Australia
Supervisors:	Professor Michael Sherris, A/Professor Jonathan Ziveyi and Yang Shen

KATIE SUN
Thesis:	Evaluating the Australian government's pension loans scheme
Supervisors:	Professor Hazel Bateman and Dr Katja Hanewald

JOEY YUNG
Thesis:	Modelling the mortality for China's oldest-old
Supervisors:	Dr Katja Hanewald and Dr Andrés Villegas

SECTION 3

EXTERNAL LINKAGES

CI MCKIBBIN WAS INVITED BY THE EUROPEAN CENTRAL BANK (ECB) TO DISCUSS STRUCTURAL
CHANGE AND THE IMPLICATIONS OF CLIMATE CHANGE FOR MONETARY POLICY AT THE ANNUAL ECB
FORUM ON CENTRAL BANKING. PICTURED: WARWICK MCKIBBIN AND MODERATOR FRANK ELDERSON,
MEMBER OF THE ECB EXECUTIVE BOARD.

INDUSTRY & GOVERNMENT LINKS

IN 2021, CEPAR ORGANISED A NUMBER OF IN-PERSON AND VIRTUAL EVENTS DESIGNED TO PROVIDE PLATFORMS FOR DISCUSSION BETWEEN RESEARCHERS, POLICYMAKERS AND INDUSTRY PRACTITIONERS AND LEADERS IN AUSTRALIA AND WORLDWIDE.

EVENTS

POLICY DIALOGUE ON MATURE WORKERS IN ORGANISATIONS

Co-hosted by CEPAR and the Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy at ANU, the Policy Dialogue, 'Mature Workers in Organisations: Emerging Policy Issues for a Productive Future' attracted over 90 delegates from government, industry, academia and the community.

The event – held on 10 June 2021 in Canberra, and also live-streamed to offsite delegates, and timed to coincide with the release of CEPAR's latest research brief on 'Tapping into Australia's Ageing Workforce: Insights from Recent Research' – attracted participants from a variety of organisations. Participants joined either in-person, in a COVID-safe environment, or via live-stream. There was presence from government and industry sectors including representatives of the Australian Research Council, the Australian Human Rights Commission, the Australian Government Departments of Social Services; Education, Skills and Employment; and Treasury, Carers NSW, Comcare, COTA, National Seniors, PwC, WTW, the World Bank, and more.

IN JUNE 2021, CEPAR HOSTED THE POLICY DIALOGUE ON MATURE WORKERS IN ORGANISATIONS, IN COLLABORATION WITH CAMA AT ANU. PICTURED FROM LEFT TO RIGHT: SENIOR RESEARCH FELLOW RAFAL CHOMIK, MARK CULLY (THE TREASURY), CI MARIAN BAIRD AND CI WARWICK MCKIBBIN

The program featured presentations on the micro and macro-demographic context of the ageing workforce in Australia, international perspectives, as well as a panel session bringing together the policy and practice perspectives.

Speakers included CEPAR Senior Research Fellow Rafal Chomik on *'Workforce Demographics: Shifts in Mature Workforce Participation and Employment'*; Chief Investigator Marian Baird on *'Policy Contexts for a Changing World: The Regulatory Context in Australia and Innovations at the Workplace Level'*; Chief Investigator Sharon Parker on *'A Healthy and High Performing Mature Workforce: Inclusion, Individualisation and Integration Strategies in Australian Workplaces'*; Senior Research Fellow Dr Daniela Andrei and Research Fellow Dr Jane Chong on *'COVID-19 and Mature Workers'*; as well as ANU researcher Dr Christine LaBond on *'Working Well, Working Wisely: How do we make Longer Working Lives Feasible and Fair?'*.

International developments, lessons and evidence coming out of Canada and Europe were presented by Professors Linda Duxbury (Carleton University, Canada), on *'Recruiting, Retaining and Empowering the Mature Worker: The Canadian Context'*; and by CEPAR Associate Investigator Donald Truxillo (University of Limerick, Ireland), on *'Workplace Interventions to Support and Ageing Workforce'*.

Additional perspectives from government and industry were provided by CEPAR Partner Organisation representatives Mark Cully, First Assistant Secretary in Treasury's Macroeconomic Analysis and Policy Division, Macroeconomic Group, and PwC's Skills for Australia Director Tim Rawlings.

The event concluded with a panel session, bringing together the policy and practice perspectives. Chaired by Chief Investigator Marian Baird, the panel included the Age Discrimination Commissioner and CEPAR Advisory Board member, The Hon Dr Kay Patterson AO; CEPAR Principal Research Fellow Myra Hamilton; and Chief Investigators Sharon Parker and John Piggott.

29TH COLLOQUIUM ON PENSIONS AND RETIREMENT RESEARCH

The Colloquium, co-hosted by CEPAR and the School of Risk & Actuarial Studies in the UNSW Business School, is a unique annual event, bringing together academics, government and industry to discuss the latest research on pensions, superannuation and retirement.

In 2021, over 138 representatives from academia, government and industry participated in the 29th Colloquium on Pensions and Retirement Research, which was held online from 1-3 December due to the COVID-19 related social and travel restrictions within Australia and overseas.

Convened by CEPAR Deputy Director Hazel Bateman, the Colloquium comprised over 50 high-level talks and presentations on financing retirement in the 2020s and beyond.

Delegates provided very positive event feedback, and praised the high level of industry engagement, commenting that it had never been greater which was also reflected in the participant numbers and the nature of the audience: half of the participants in 2021 were drawn from industry and government.

Especially topical was a panel session focused on the Australian Government's Retirement Income Covenant. The session was chaired by CEPAR Director John Piggott and panellists included Robbie Campo (Group Executive – Brand,

Engagement, Advocacy and Product, Cbus); Jeremy Cooper (Chairman, Retirement Income, Challenger); Jordan George (Director, Retirement, Advice and Investments Division, Australian Treasury); and Suzanne Smith (Executive Director – Superannuation, Australian Prudential Regulation Authority (APRA)).

In her speech, APRA's Executive Director Superannuation Division, Suzanne Smith said 'we are very supportive of, and draw great insight from, the work of CEPAR in this and other related topics.'

In addition, the Colloquium featured a plenary session on financing aged care which was chaired by CEPAR Advisory Board Chair Marc de Cure. Speakers included Bridget Browne (Australian National University, EY) and David Cullen (National Disability Insurance Scheme) on *'Long-Term Financing Options for Aged Care in Australia: Lessons from the Royal Commission'*; Julie Ratcliffe (Flinders University) on *'A Preference for Quality: Australian General Public's Willingness to Pay for Home and Residential Care'*; and CEPAR Chief Investigator Michael Sherris (UNSW Sydney) on *'Sustainable Aged Care Financing in Australia'*.

Further Colloquium sessions covered the latest research on pensions and climate change; superannuation; pensions, labour supply and household decisions; the Retirement Standard

and new retirement products; health and longevity; financial decisions; home equity release; annuities; retirement outcomes; as well as a session on the latest research on pensions and long-term care in Asia which was chaired by former CEPAR Advisory Board member Philip O'Keefe who is now a Professor of Practice at CEPAR, UNSW Business School, and the Director of CEPAR's Ageing Asia Research Hub.

On 3 December, the 29th Colloquium of Pensions and Retirement Research also hosted a special online session on the global experience of financing retirement, sponsored by the International Pension Research Association (IPRA). With insights being showcased from across the world, this session created an opportunity to hear global trends in financing retirement in the 2020s and beyond (see page 93).

Suzanne Smith · 2nd
Executive Director Superannuation at Australian Prudential Regulation A...
2h · 🌐   •••

Thanks to CEPAR for inviting Australian Prudential Regulation Authority into this important conversation. It is critical that all industry stakeholders come together to embrace this opportunity to improve the lives of millions of Australians in retirement Jordan George Jeremy Cooper Robbie Campo Hazel Bateman ARC Centre of Excellence in Population Ageing Research (CEPAR) #retirement #retirementincomecovenant #opportunity

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Hazel Bateman · 1st
Deputy Director, ARC Centre of Excellence in Population Ageing Research
2h · Edited · 🌐

Terrific discussion on the Retirement Income Covenant at the ARC Centre of Excellence in Population Ageing Research (CEPAR) - 29th Colloquium on Pensions and Retirement Research https://lnkd.in/gzptczbV. Thanks Jordan George , Suzanne Smith, Robbie Campo, Jeremy Cooper and John Piggott - and all colloquium participants.

INDUSTRY & GOVERNMENT LINKS

SPECIAL PURPOSE ADVISORY BOARD MEETING ON FINANCING AGED CARE

In 2021, CEPAR hosted a Special Purpose Advisory Board meeting, moderated by CEPAR Advisory Board Chair Marc de Cure. The theme was 'Financing Aged Care' and featured a presentation on 'Sustainable Aged Care Financing in Australia' by Chief Investigator Michael Sherris. Additional participating CEPAR researchers included Hazel Bateman, Philip O'Keefe and John Piggott. Advisory Board members and representatives from CEPAR's partner organisations the ABS; COTA; the Departments of Health, Prime Minister and Cabinet, Social Services; The Reserve Bank of Australia; the Treasury; PwC; WTW and the World Bank, participated in the meeting designed to share CEPAR's research and insight on Aged Care and to identify issues of particular concern to government, industry and the wider community as well as knowledge gaps and possible future directions.

INFLUENCING POLICY AND PRACTICE

In addition to participating in CEPAR outreach events, CEPAR personnel contributed to the development of government policy and business and community practice in a number of ways in 2021.

SUBMISSIONS AND EXPERT ADVICE

CEPAR personnel provided expert advice on a range of matters in 2021, with major contributions in the areas of retirement incomes, aged care, fertility trends, immigration policy and international development policy.

CEPAR researchers were featured heavily in the government's Final Report of the Royal Commission into Aged Care Quality and Safety, published in March this year. CEPAR researchers had over fifty mentions throughout the report.

Hazel Bateman consulted extensively with the

CIS BATEMAN AND PIGGOTT WERE INVITED TO THE COTA NATIONAL POLICY FORUM ON RETIREMENT INCOME POLICY BEYOND 2021. PICTURED: HAZEL BATEMAN, JEREMY COOPER (CHALLENGER) AND IAN YATES (COTA) AT THE NATIONAL PRESS CLUB IN CANBERRA.

superannuation industry, including Aware Super, Household Capital, Vanguard Super and Cbus. She also met with the New Zealand Retirement Commission to discuss the 2022 review of the New Zealand retirement income system. Along with John Piggott, Bateman participated in COTA's Australia's National Policy Forum, 'Retirement Income Policy Beyond 2021, Where Should the Review Lead Us?'. Piggott and Bateman also served as expert panel members in public fora on the Retirement Income Review, hosted by the Australian Academy of the Social Sciences and the Council on the Ageing (COTA).

Throughout the year, Peter McDonald provided expert advice on migration policy both in Australia and abroad. This included a consultation meeting, alongside Jeromey Temple, in relation to the 2021-22 Migration Program with the Department of Home Affairs and participation in the Department's roundtable discussion on the 2022-23 Migration Program. McDonald also met with the Shadow Minister for Immigration; presented a seminar to the Department of Treasury on the employment of temporary immigrants in Australia; and discussed with

Minister Tokuro Furuya of the Embassy of Japan, on the applicability of Australian immigration policy to Japan.

Jeromey Temple provided advice to the Australian Institute of Health and Welfare (AIHW) on aged care data issues and represented CEPAR at the AIHW Aged Care Data Advisory Group. Temple also was sought by the Australian Bureau of Statistics for expert advice on a new instrument to measure food insecurity among older Australians.

Throughout the year Warwick McKibbin met with representatives of the Australian Commonwealth Treasury, the International Monetary Fund and the Business Council of Australia.

2021 INTERGENERATIONAL REPORT

The 2021 Intergenerational Report (IGR), released by the Australian Government in June 2021, drew in part on projections and research conducted by CEPAR senior researchers.

Projections of fertility rates, a central component of the report, were made by Chief Investigator Professor Peter McDonald. Chief Investigator Professor Warwick McKibbin provided advice on climate policy responses on the macro-economy.

The lifetime economic and fiscal impacts of different groups of permanent migrants have been estimated using Treasury's OverLapping Generations model of the Australian economy (OLGA). This model was developed in consultation with Senior Research Fellow Dr George Kudrna and Associate Investigator A/Professor Chung Tran.

CEPAR researchers were also sought for comment following the report's release in June. Several CEPAR researchers provided an assessment of the IGR: Chief Investigator Professor Peter McDonald and CEPAR Associate Professor Jeromey Temple published an op-ed in the *Australian Financial Review*; Senior Research Fellow Rafal Chomik provided an analysis of the report findings in *The Conversation*; and Director John Piggott discussed the report findings on the ABC's *The Economists* show. Piggott and McDonald were also sought by NSW Treasury for expert advice in relation to the Intergenerational Report.

MEMBERSHIP OF ADVISORY GROUPS AND BOARDS
Kaarin Anstey served as a member of the Commonwealth Department of Health's Ageing and Aged Care Mission Executive Advisory Panel and the Australian Institute of Health and Welfare's Dementia in Australia Working Group. She also contributed to World Health Organisation guidelines on risk reduction for cognitive decline and dementia. Anstey serves as a board member of the Dementia Australia Research Foundation and has become a member of the Australian Institute of Health and Welfare Dementia Expert Advisory Group.

Hazel Bateman continues to serve as a member of the Advisory Board of the Conexus Institute which seeks to become a catalyst for change in the Australian retirement sector by connecting industry, academia, regulators and policymakers. She also serves as a member of UniSuper's Consultative Committee and Mercer's Global Pension Index Advisory Board.

Fiona Blyth served as senior advisor for a North Coast Primary Health Network project focused on the development of a system dynamics model to inform a healthy ageing strategy.

George Kudrna continued to serve as a member of the Commonwealth Treasury's Steering Group for Treasury's OLGA model.

Peter McDonald and Tom Wilson provided advice as members of the NSW's Department of Planning, Industry and Environment's Expert Population Advisory Group. At the Department's November meeting, Wilson presented on future mortality rates for NSW and McDonald on prospects for international migration to Australia and New South Wales. McDonald continued to serve as a member of the Asian Demographic Research Institute Advisory Board.

Warwick McKibbin continues to serve as a member of the Australian Treasury Expert Panels on COVID-19 and Forecasting Methodologies.

John Piggott was appointed to the Population Expert Panel of the Australian Government's Centre for Population. He and John Beard continued to serve as commissioners of the US National Academy of Medicine's International Commission on Creating a Global Roadmap for Healthy Longevity, along with fifteen other thought leaders, from both the public and private sectors.

Jeromey Temple continues to serve on the Australian Institute of Health and Welfare's Aged Care Data Advisory Group and the NHMRC National Institute for Dementia Research's CALD review advisory group.

PRESENTATIONS
Highlights included an online address at which CI Warwick McKibbin presented his research and discussed structural change and the implications of climate change for monetary policy at the annual European Central Bank Forum on Central Banking which was held in dual mode and

live-streamed all over the world. McKibbin also presented at the '10th Annual International Forum on Economic Development and Public Policy' held at the Ministry of Finance, Republic of Indonesia.

Marian Baird was invited to present to the Victorian Government's Inquiry into Economic Equity for Victorian Women, on 'Women and the Australian labour market – Opportunities for Change. Baird, along with colleague, Research Associate Alison Williams, were also involved in the Commonwealth Department of Education, Skills and Employment, 'mature age employment sensemaking session'.

An online address to the World Health Organisation was given by Kaarin Anstey on 'Why we need health approaches to risk reduction'.

Myra Hamilton presented to COTA NSW and the Older Women's Network on, 'Security for older single women without children'.

Tom Wilson conducted a seminar to the Centre for Population, Department of the Treasury on the projections of the future birthplace composition of Australia's population.

NATIONAL & INTERNATIONAL LINKS

CANADA · **USA** · **UK** · **IRELAND** · **BELGIUM** · **FRANCE** · **NORWAY** · **NETHERLANDS** · **GERMANY** · **SWITZERLAND** · **ITALY** · **INDIA** · **THAILAND** · **SINGAPORE** · **MONGOLIA** · **CHINA** · **SOUTH KOREA** · **JAPAN** · **PHILIPPINES** · **INDONESIA** · **AUSTRALIA**
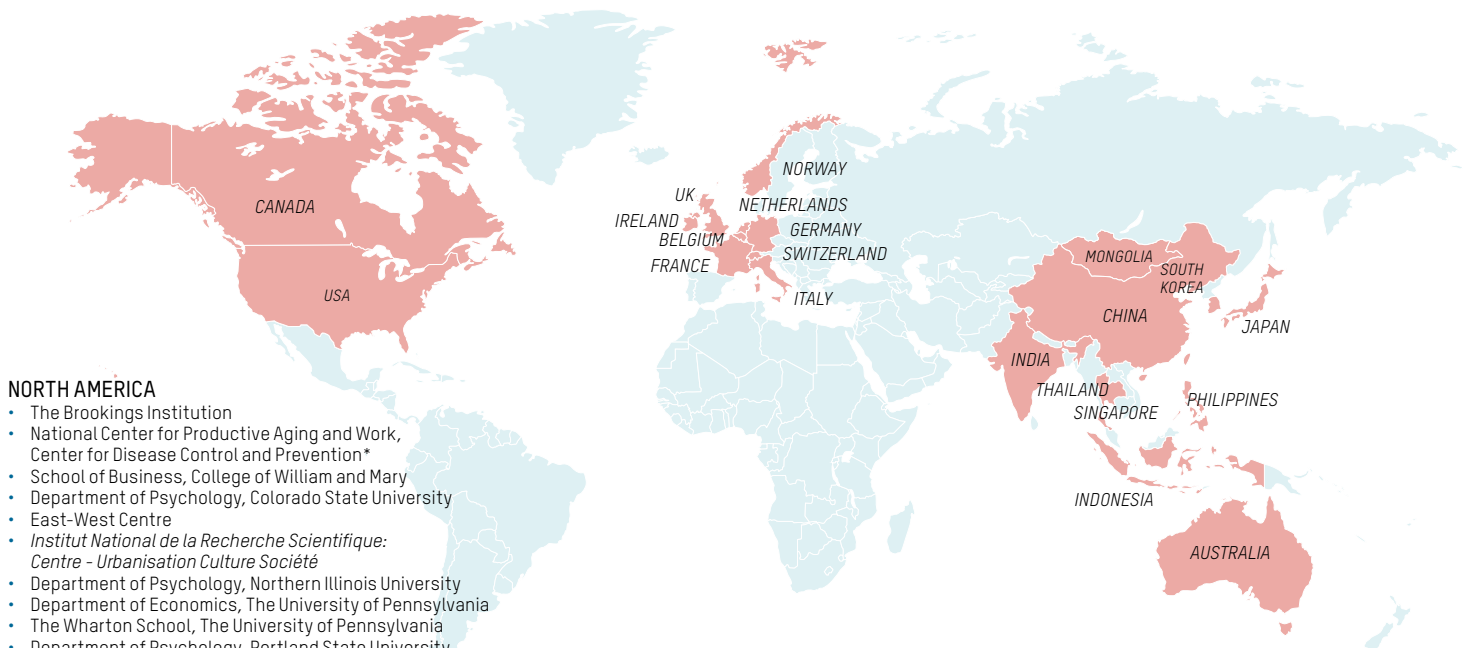
NORTH AMERICA
- The Brookings Institution
- National Center for Productive Aging and Work, Center for Disease Control and Prevention*
- School of Business, College of William and Mary
- Department of Psychology, Colorado State University
- East-West Centre
- *Institut National de la Recherche Scientifique: Centre - Urbanisation Culture Société*
- Department of Psychology, Northern Illinois University
- Department of Economics, The University of Pennsylvania
- The Wharton School, The University of Pennsylvania
- Department of Psychology, Portland State University
- Department of Statistics and Mathematics, Purdue University
- Faculty of Industrial and Organisational Psychology, Saint Louis University
- School of Aging Studies, University of South Florida
- Department of Statistics and Actuarial Science, University of Waterloo
- Brown School, Washington University in St Louis
- The World Bank

EUROPE
- School of Social Sciences, University of Manchester
- CESifo
- CPB Netherlands Bureau for Economic Policy Analysis
- Dutch Central Bank
- Netspar
- Institute for Ageing, Newcastle University
- Organisation for Economic Co-operation and Development
- Ragnar Frisch Centre for Economic Research
- Department of Mathematics, Université Libre de Bruxelles
- Institute of Psychology, University of Bern
- Institute of Psychology, University of Duisburg-Essen
- Department of Psychology, University of Exeter
- School of Mathematics, Statistics and Actuarial Sciences, University of Kent
- Business School, University of Leeds
- Department of Psychology, University of Leipzig
- Kemmy Business School, University of Limerick
- Health Economics Research Centre, University of Oxford
- Department of Economics, University of Parma
- Department of Economics, University of St. Gallen
- Department of Human Resources Studies, Tilburg University
- Faculty of Economics, University of Trieste
- Management Group, WHU - Otto Beisheim School of Management
- Department of Economics, Wuerzburg University

ASIA
- Asian Development Bank
- Asia-Pacific Economic Cooperation
- Bank of Thailand*
- Brookings-Tsinghua Centre for Public Policy
- Chinese Academy of Social Sciences
- Centre for Employment and Social Security, Fudan University
- Indonesian National Population and Family Planning Board
- Indonesian Ministry of National Development Planning (Bappenas)
- Keio University
- Korea Development Institute
- Korea University
- Asiatic Research Institute, Korea University
- National Institute of Public Finance and Policy, New Delhi
- Lee Kuan Yew School of Public Policy, National University of Singapore
- Mahidol University*
- Mongolian National University of Medical Sciences*
- Institute of Population and Research and Centre for Ageing and Health Services, Peking University
- School of Entrepreneurship and Management, ShanghaiTech University
- Department of Labor and Social Security, South China Agriculture University
- Statistics Indonesia
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- Vietnam Academy of Social Sciences*
- College of Public Administration, Zhejiang University

AUSTRALIA
- The University of New South Wales
- Australian National University
- Curtin University
- The University of Melbourne
- The University of Sydney
- Department of Psychology, Macquarie University
- Emerging Researchers in Ageing Initiative, Monash University
- NeuRA
- Research Centre for Generational Health and Ageing, The University of Newcastle, Australia
- Economics Discipline Group, The University of Technology Sydney

* denotes new organisation collaborating with, or involved in, the Centre

IN 2021, CEPAR ENSURED A CONTINUED DIALOGUE WITH NATIONAL AND INTERNATIONAL COLLEAGUES BY HOSTING A NUMBER OF VIRTUAL EVENTS, IN RESPONSE TO THE CONTINUED SOCIAL RESTRICTIONS AND BORDER CLOSURES CAUSED BY COVID-19. IN PARTICULAR, CEPAR'S LEADERSHIP OF A NUMBER OF VIRTUAL EVENTS ASSOCIATED WITH THE INTERNATIONAL PENSION RESEARCH ASSOCIATION CONTINUED TO EXTEND THE CENTRE'S GLOBAL REACH IN 2021

NATIONAL LINKAGES

CEPAR Chief Investigators (CIs) and Australian-based Associate Investigators (AIs) connect the Centre with premier research groups around the country and its national outreach and engagement programs are designed to provide opportunities for all researchers focused on the issue of population ageing to come together to share research findings.

The Centre's CEPAR *Affiliates Scheme* aims to widen CEPAR's reach by providing a mechanism for researchers not eligible to become AIs to engage with CEPAR. In particular, it provides a mechanism for researchers based in industry and government to connect with the Centre.

In collaboration with the UNSW Ageing Futures Institute, CEPAR hosted a webinar on 'Financing and Sustainability of Future Proofing Aged Care' which attracted over 85 participants from multiple disciplines across 13 Australian and international universities, as well as from the Australian Commonwealth Government Departments of Health, Social Services, and Treasury; Carers NSW; HammondCare; the NSW Department of Communities and Justice; Palliative Care Australia; PwC; Taylor Fry; and UniSuper. Chaired by CEPAR Director John Piggott, the webinar was opened by CI Professor Kaarin Anstey, and followed by presentations from CEPAR CIs Professor Michael Sherris and Professor Hazel Bateman, on *'Sustainable Aged Care Financing in Australia'* and *'Flexible Insurance for Informal Long-term Care'*, respectively. The event concluded with a panel discussion on financing aged care.

Other events in 2021 which served to strengthen the Centre's links with key researchers and research groups nationally as well as to provide opportunities for emerging researchers to come together included the Annual Colloquium on Pensions and Retirement Research (see page 87),

the Pension, Retirement and Ageing Seminar Series and the newly established CEPAR Mature Workers in Organisations (MWOS) Virtual Symposium Series.

In May 2021, CEPAR's Organisations and the Mature Workforce research stream launched the CEPAR MWOS Virtual Symposium Series with the aim of encouraging interaction in this area between academic researchers from a broad range of disciplines as well as from industry and government.

Three 1-hour MWOS Virtual Symposia were held in May, June and December, and attracted participants from a variety of universities and organisations, including all five CEPAR nodes. Participants from industry and government included representatives of the Asian Development Bank; the Australian Bureau of Statistics; the Australian Government Departments of the Prime Minister and Cabinet (Office for Women), Education, Skills and Employment, Communities and Justice; as well as Carers NSW; Comcare; Deloitte, the NSW Department of Planning Industry and Environment, and more. Recordings of the talks were publicised afterwards and are available on the CEPAR website and its YouTube channel.

The Pension, Retirement and Ageing Seminar Series, jointly hosted by CEPAR and the School of Risk and Actuarial Studies at UNSW Sydney, attracted participants from a variety of universities and disciplines in 2021, including the CEPAR nodes as well as Deakin University, the Tax and Transfer Policy Institute at the ANU, the Association of Superannuation Funds of Australia (ASFA), the Conexus Institute, the University of Technology Sydney, and many more. In the first half of 2021, the Pension, Retirement and Ageing Seminar Series were offered in dual-mode to capitalise on both the networking opportunities of a face-to-face meeting as well as the inclusiveness and accessibility of an online event, and was converted to an online delivery

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NATIONAL & INTERNATIONAL LINKS

from June 2021 due to social and travel restrictions in Australia resulting from the COVID-19 pandemic.

INTERNATIONAL LINKAGES

CEPAR Partner and Associate Investigators provide exceptional opportunities for CEPAR to engage with leading international groups. The Centre's strong links with specialist groups working on a range of issues pertinent to the challenges of population ageing provide the foundation for joint workshops, grant applications to fund collaborative research programs, and other initiatives.

In 2021, CEPAR continued to play a leading role in uniting pension researchers across the globe following the establishment of the International Pension Research Association (IPRA), with CEPAR CI Hazel Bateman as its inaugural President. Three major online events attracted strong interest from the international research community, providing a forum to share insights and experiences and to maintain and expand connections in a climate of border restrictions.

Regionally, CEPAR remains strongly committed to expanding its linkages. In 2019 CEPAR established the Ageing Asia Research Hub (AARH), partially supported by a large grant from the UNSW Business School, to expand the work previously undertaken by the Australia-China Population Ageing Research Hub. A major objective of the Hub is to build connection between the UNSW Sydney node of CEPAR and leading research institutions in Asia. A planned workshop on Population Ageing and the Chinese Economy to be held in Shanghai jointly hosted by the AARH and ShanghaiTech was postponed to 2021 as a result of border closures. In addition, a new linkage grant project, focused on Indonesia but with strong potential for application to other Southeast Asian nations, strengthens CEPAR's collaboration with The World Bank and establishes a new connection with the Indonesian Ministry of National Development Planning (Bappenas). The project is led by CEPAR Senior Research Fellow George Kudrna and focuses on policy modelling for ageing in emerging economies.

CEPAR's ongoing membership of the Steering Group of the Association of Pacific Rim Universities (APRU) Population Ageing Research Hub strongly positions the Centre to lead regional collaborative initiatives in ageing research.

LEADERSHIP OF INTERNATIONAL ASSOCIATIONS AND HUBS

THE INTERNATIONAL PENSION RESEARCH ASSOCIATION (IPRA)

The International Pension Research Association (IPRA) is an international organisation established with the aim of improving the quality and impact of research on pensions and related ageing issues to optimise social and economic outcomes for an ageing world.

Its executive committee comprises representatives of the founding organisations: CEPAR; the Pension Research Council at the Wharton School of the University of Pennsylvania; the Network for Studies on Pensions, Aging, and Retirement (Netspar) at Tilburg University; WTW, and the OECD. With CEPAR CI Hazel Bateman serving as the Association's inaugural President, CEPAR has continued to play a major role in 2021 in supporting IPRA in its vision to become the global voice of research in the fields of pensions, ageing and retirement.

PROFESSOR OLIVIA S. MITCHELL
BA Harvard, MA PhD Wisconsin-Madison
PARTNER INVESTIGATOR

Dr Olivia S. Mitchell is International Foundation of Employee Benefit Plans Professor, and Professor of Business Economics/Policy and Insurance/Risk Management, at the Wharton School of the University of Pennsylvania. At Wharton, she is also the Executive Director of the Pension Research Council and the Boettner Center on Pensions and Retirement Research, a Fellow of the Wharton Financial Institutions Center, and a Fellow of the Leonard Davis Institute; she also serves on the Board of the Penn Aging Research Center. Concurrently Dr Mitchell is a Research Associate at the National Bureau of Economic Research and a Co-Investigator for the Health and Retirement Study at the University of Michigan.

Dr Mitchell's main areas of research and teaching are international private and public insurance, risk management, public finance, and compensation and pensions. Her extensive publications (over 300 books and articles) analyse pensions and healthcare systems, wealth, health, work, wellbeing, household financial decision making, and retirement. She served on President Bush's Commission to Strengthen Social Security, the US Department of Labor's ERISA Advisory Council, and served as Vice President of the American Economic Association. She has addressed many groups including the World Economic Forum; the International Monetary Fund; the Investment Company Institute; the White House Conference on Social Security; and the President's Economic Forum. She is listed in the top 10 women economists of the world in 2020.

In addition to managing the IPRA website, which was developed and established in the previous year by CEPAR, the Centre also spearheaded and led the organisation of six highly successful online events: an international conference; and webinars including: 'Mental Health, Elderly Suicide and Retirement in China' featuring CEPAR Partner Investigator Professor Hanming Fang, Professor of Economics at the University of Pennsylvania (USA); 'The Multifaceted Effects of the Pandemic and the Lockdown Measures on Older EU-Citizens' featuring Professor Axel Börsch-Supan, Director of the Munich Center for the Economics of Aging, Max Planck Institute for Law and Social Policy (Germany); 'The Modest Long-Run Effects of Automatic Savings Policies' featuring John Beshears, Associate Professor of Business Administration at Harvard Business School (USA); 'Selection, Annuities, and the Drawdown of DC Balances' featuring James Poterba, Professor of Economics at MIT (USA) and President of the National Bureau of Economic Research. A special session on 'Financing Retirement in the 2020s and Beyond: The Global Experience' was also held in conjunction with the 29th Colloquium on Pensions and Retirement Research.

The international IPRA conference in June attracted over 350 participants from 65 countries, keen to hear from the latest developments in pensions and retirement research emerging from COVID-19 and beyond. Organised and co-hosted online by CEPAR in collaboration with the other IPRA founding members the OECD, Netspar, Wharton School of the University of Pennsylvania, WTW, as well as the International Organisation of Pension Supervisors (IOPS), the conference was the sixth in the series of annual global meetings previously organised by the International Network for Pensions, Aging and Retirement Research, IPRA's precursor.

The annual international conference brings together academics, policymakers and industry practitioners from around the globe to discuss and debate the most pressing pension and retirement issues. With 60% of this year's audience drawn from government and industry, the conference provided a key opportunity to share the latest developments in pensions and retirement research with a view to influencing the development of policy and practice. The diverse one-day program examined long-term care, climate change as well as the impact of COVID-19 on the pension landscape, and also featured a presentation by CEPAR Chief Investigator and IPRA President Hazel Bateman, on informal long-term care insurance products.

The four IPRA webinars drew an audience of a total of 797 registered participants, representing 58 countries. Attracting researchers, policymakers, industry practitioners and pension regulators from around the globe, the webinars provided an opportunity for engagement with individuals interested in retirement, pensions and ageing research, and served to build the profile of IPRA and, by extension, CEPAR.

'Financing Retirement in the 2020s and Beyond: The Global Experience' was the theme of the IPRA special session of the 29th Colloquium of Pensions and Retirement Research, co-hosted by CEPAR and the UNSW School of Risk and Actuarial Studies and held online on 3 December 2021. The event provided an opportunity to hear global trends in financing retirement and featured six research presentations from Israel, India, Luxembourg, Peru, Chile, and the US, covering a large part of the IPRA constituency. The event again was instrumental in raising the global profile of both CEPAR and the annual Colloquium, attracting over 220 delegates from 46 countries.

All IPRA events attracted significant participation and contributions from CEPAR's Partner Organisations. As an example, CEPAR Advisory

Board member Dr Mike Orszag, Head of Research, WTW, and CEPAR Partner Investigator Olivia S. Mitchell from the Wharton School of the University of Pennsylvania were involved in chairing five of the events; and CEPAR Partner Investigator Professor Hanming Fang from the University of Pennsylvania delivered a public talk at one of the events.

THE APRU POPULATION AGEING RESEARCH HUB

Launched in 2015 at UNSW Sydney, The Association of Pacific Rim Universities' (APRU) Population Ageing Research Hub brings together world class researchers from different disciplines and provides opportunities for increased research collaboration on the topic of population ageing in the region.

Hosted by CEPAR/UNSW Sydney for the period 2015 -2017, with John Piggott acting as Chair, CI McDonald and former CI Cumming serving as two of ten members on the Steering Group, the Hub has been a key component of CEPAR's international linkages strategy.

From 2018 to 2020 the Hub was hosted by Keio University in Japan with Professor Atsushi Seike taking over the duties of Steering Group Chair. CEPAR remains actively involved in the Hub with CIs Piggott and McDonald remaining on the Steering Group. APRU remains an important conduit to connection in the region. From 2021, The Hub will be hosted by the University of Indonesia.

AGEING ASIA RESEARCH HUB

Driving our engagement with Asia is CEPAR's Ageing Asia Research Hub which pursues a multidisciplinary research program in three key related strands: healthy ageing; retirement incomes; and long-term care (see pages 70 - 76 for further details). Together, they will deliver new insights into priority reform areas, and the policy strategies to best suit the changing economic and demographic structure.

NATIONAL & INTERNATIONAL LINKS

In 2021, the Hub transitioned to new leadership following Philip (Pip) O'Keefe's appointment as Director, taking over from John Piggott who had led the Hub since its inception in 2019. AI Dr Katja Hanewald and Senior Research Fellow Bei Lu continue on as Directors of Research and Outreach respectively. The Hub also comprises five professorial fellows, seven research fellows/ senior research associates and four PhD students. The professorial fellows shape the development and growth of the Hub's research program and facilitate linkages with high quality organisations in the region.

To achieve major impact, the Hub leverages CEPAR's existing collaborative relationships with leading universities and organisations in the region as well as its partnerships with the World Bank, the Department of Foreign Affairs and Trade and WTW. With collaborative research projects established in China, Indonesia, Singapore, Thailand and Vietnam, and connections with organisations such as the Asian Development Bank and the East-West Centre, the Hub seeks external partners, both within Australia and internationally, to develop specific research projects.

INTERNATIONAL VISITORS & VISITS

Visits to collaborators at international institutions and the hosting of visitors from abroad has been a key feature of Centre life over the last decade with both incoming and outgoing visitors ranging from experts with distinguished reputations in their fields to early career researchers interested in developing research programs in the area of population ageing. Typically, our visitors participate in a range of CEPAR events and activities, contribute to the development and execution of research projects, and bring an international perspective to bear on the research program.

Border closures meant that this aspect of Centre life in 2021 was largely suspended. When international borders again open (currently planned for 2022), CEPAR will continue in-person international collaborations.

CEPAR hosted the following researcher in 2021:

QIQI WANG
RENMIN UNIVERSITY
1 January – 16 August 2021

SECTION

ANNUAL REPORT 2020

4

PERFORMANCE INDICATORS & FINANCIAL STATEMENT

2021 KEY PERFORMANCE INDICATORS

MEASURE	2021 TARGET	2021 RESULT
Refereed journal articles	180	204
Book chapters	8	9
Working papers	20	34
Percentage appearing in top tier journals [2]	30%	44.12%
Training courses held/offered by the Centre		
• Research ethics and compliance workshop	1	1
• Gender equity and diversity workshop	1	1
• ECR methodology workshop	1	1
• Emerging Researchers in Ageing workshop(s)	1	1
• Continuous time and financial modelling applications workshop [3]	1	0
Workshops/conferences held/offered by the Centre	5	10
Additional researchers working on Centre research		
• Postdoctoral researchers	9	4
• Honours students	5	4
• PhD students	10	12
• Masters by research students	0	0
• Masters by coursework students	0	0
Associate Investigators	2	4
Postgraduate completions [4]	14	7
Mentoring programs [5]	3	2
Presentations/briefings		
• Public	15	29
• Government (parliamentarians and departments/agencies at both state and federal level)	45	50
• Industry/business/end users	25	69
New organisations collaborating with, or involved in, the Centre	3	5
Students mentored through the ERA program	800	975
Translational documents published	7	5

2 Percentage of publications, indexed in Scopus and/or the Australian Business Deans Council (ABDC) Journal Quality List, included in the top 10% of journals by Scopus SciVal CiteScore Percentile or ranked by the ABDC as A or A*.

3 2021 Workshop postponed due to the pandemic.

4 A number of PhD completions scheduled for 2021 were delayed to 2022 due to unforeseen circumstances including the pandemic.

5 The 2021 Stakeholder Engagement Program, a CEPAR mentoring program, was delayed due to the pandemic and is scheduled for March and April 2022.

RESEARCH OUTPUTS

A1 BOOK

1. Finkelstein, L., Truxillo, D. M., Fraccaroli, F., & Kanfer, R. (2021). Ageless Talent: Enhancing the Performance and Well-being of Your Age-Diverse Workforce. Taylor and Francis Group, Routledge, New York.

2. Pitacco, E. (2021). Life Annuities. From Basic Actuarial Models to Innovative Designs. Risk Books. London.

3. Wilson, T., Temple, J., McDonald, P., Utomo, A. and Brijnath, B. (2021). The Changing Migrant Composition of Australia's Population. Springer, Switzerland.

B BOOK CHAPTERS

1. Andrei, D.M., & Parker, S. K. (Jan 2022). Organizational Meta-Strategies for Younger and Older Workers. In H. Zacher & C. Rudolph (Eds.). Age and *Work: Advances in Theory, Methods, and Practice*. Taylor and Francis Group, Routledge, New York.

2. Anstey, K.J., & Dixon, R.A. (2021). Resilience in Mid-life and Aging. In Willis, S., & Schaie, W. (Eds). *Handbook of the Psychology of Aging*. (9th Ed.). Academic Press. U.S.A.

3. Awuviry-Newton, K., Tavener, M., Wales, K. and Byles, J. (2021). Towards a Better Understanding of the Long-Term Care Needs of Older People in Ghana. In Villalobos Dintrans, P. *The Future of Long-Term Care*. Nova Science Publishers, New York.

4. Baird, M. & Williams, A. (2021). Ageing, Work, Care in Australia: Progress and Prospects in Meeting Sustainable Development Goals of Inclusive Growth and Gender Equality. In Dhakal, S. P., Nankervis, A., & Burgess, J. *Ageing Asia & Pacific strategies & policies for sustainable development*. Springer Nature, Switzerland.

5. Kenning, G., Bennett, J., Kuchelmeister, V., Ginnivan, N. & Neidorf, M. (2021). An Immersive Art-based Approach to Engaging with the Embodied, Sensory and Affective Experience of Living with Dementia. In Brankaert, R., Raber, C., Houben, M., Malcolm, P. and Hannan, J. *Dementia Lab 2021: Supporting Ability Through Design*. Springer, Cham.

6. Truxillo, D. M., Brady, G., Cadiz, D., & Rineer, J. (2021). Healthy Aging, Absenteeism, and Presenteeism. In Zacher, H. and Rudolph, C. (Eds.). *Age and Work: Advances in Theory, Methods, and Practice*. SIOP Organizational Frontiers Series. Taylor and Francis Group, Routledge, New York.

7. Yiengprugsawan, V.S. (2021). Caregiver Activity Survey. In: Maggino F. (eds) *Encyclopedia of Quality of Life and Well-Being Research*. Springer. doi: 10.1007/978-3-319-69909-7_279-2.

8. Yiengprugsawan, V.S. (2021). CarerQol Instrument. In: Maggino F. (eds) *Encyclopedia of Quality of Life and Well-Being Research*. Springer, doi: 10.1007/978-3-319-69909-7_288-2.

9. Yiengprugsawan, V. S., Kelly, M., Tawatsupa, B. (2021). SF-8 TM Health Survey. In: Maggino F. (eds) *Encyclopedia of Quality of Life and Well-Being Research*. Springer. doi: 10.1007/978-3-319-69909-7_3664-2.

C1 JOURNAL ARTICLES: ARTICLES IN SCHOLARLY REFEREED JOURNALS

1. Abdel Shaheed, C., Blyth, F., Furmage, A.M. and Stanaway, F. (2021). Getting the "Balance" Right in Clinical Trials. *BMJ*. 375, n2869. doi.org/10.1136/bmj.n2869.

2. Almendrales Rangel, C., Noble, Y., Radd-Vagenas, S., Mavros, Y., Flood, V.M., O'Leary, F., Brodaty, H., Sachdev, P.S., Heffernan, M., Valenzuela, M., Anstey, K.J., Daniel, K., Ginige, J.A., San Jose, J.C., Chau, T., Garnés Rancurello, S. and Fiatarone Singh, M.A. (2021). Nutrition Module Design in Maintaining your Brain: An Internet-based Randomized Controlled Trial to Prevent Cognitive Decline and Dementia. *British Journal of Nutrition*. p.1-10. doi: 10.1017/S0007114521001859.

3. Alonso Garcia, J., Bateman, H., Bonekamp, J., and Stevens, R. (2021). Spending from Gulated Retirement Drawdowns: The Role of Implied Endorsement. *Scandinavian Journal of Economics*. 123(3), 810-847. doi.org/10.1111/sjoe.12437.

4. Andrews, S.C., Langbehn, D.R., Craufurd, D., Durr, A., Leavitt, B.R., Roos, R.A., Tabrizi, S.J., Stout, J.C., and the TRACK-HD Investigators. (2021). Apathy Predicts Cognitive Decline over 24 months in Premanifest Huntington's Disease. *Psychological Medicine*. 51(8), 1338-1344. doi: 10.1017/S0033291720000094.

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C5 UNPUBLISHED REPORTS (WORKING PAPERS)

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2 Bateman, H., Dobrescu, I., Liu, J., Newell, B.R. & Thorp, S. (2021). Determinants of Early-Access to Retirement Savings: Lessons from the COVID-19 Pandemic. CEPAR Working Paper Series 2021/21.

3 Bateman, H., Gerrans, P., Thorp, S. and Zeng, Y. (2021). Life Insurance: Decision States, Financial Literacy and Personal Values. CEPAR Working Paper Series 2021/16.

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6 Doan, B., Reeves, J.J. and Sherris, M. (2021). Portfolio Management for Insurers and Pension Funds and COVID-19: Targeting Volatility for Equity, Balanced and Target-Date Funds with Leverage Constraints. CEPAR Working Paper Series 2021/01.

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8 Fehr, H., Hofmann, M. and Kudrna, G. (2021). Pensions, Income Taxes and Homeownership: A Cross-country Analysis. CEPAR Working Paper Series 2021/23.

9 Fernando, R. and McKibbin, W.J. (2021). Macroeconomic Policy Adjustments due to COVID-19: Scenarios to 2025 with a Focus on Asia. CAMA Working Paper 17/2021, CEPAR Working Paper Series 2021/15.

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20 Kessy, S., Sherris, M., Villegas, A.M. and Ziveyi, J. (2021). Mortality Forecasting using Stacked Regression Ensembles. CEPAR Working Paper Series 2021/09.

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34 Yang, O., Yong, J., Zhang, Y. and Scott, A. (2021). Competition, Prices and Quality of Residential Aged Care in Australia. CEPAR Working Paper Series 2021/10.

RESEARCH OUTPUTS

CEPAR TRANSLATIONAL DOCUMENTS

1   Baird, M., Hamilton, M., Gulesserian, L., Williams, A. and Parker, S.K. (February 2021). CEPAR Industry Report. An Employer Lens on COVID-19: Adapting to Change in Australian Workplaces.

2   Chomik, R. and Khan, F.J. (June 2021). CEPAR Research Brief. Tapping into Australia's Ageing Workforce: Insights from Recent Research.

3   Chomik, R., Khan, F.J. and Cumming R. (June 2021). CEPAR Fact Sheet. Concord Health and Ageing in Men Project (CHAMP).

4   Chomik, R. and Jacinto, M. (August 2021). CEPAR Fact Sheet. Peak Performance Age in Sport.

5   O'Loughlin, K., Williams, A., Magnaye, A., Eales, J. & Fast, J. (December 2021). CEPAR Research Report. Carer Leave Policies in Australia.

OTHER OUTPUTS

1   Adam, K., di Mauro, B.W., McKibbin, W., McMahon, M., Reichlin, L., Reis, R. and Ricco, G. (September 2021). Report. The ECB Strategy: The 2021 Review and its Future.

2   Anstey, K., McDonald, P., Temple, J. and Wilson, T. (2021). CEPAR Population Ageing Futures Data Archive updated. CEPAR Population Ageing Futures Data Archive.

3   Chatzi, G. and Nazroo, J. (2021). Report. English Longitudinal Study of Ageing Rapid Reports. Differences in Subjective and Objective Social Isolation and Subjective Loneliness before and during the COVID-19 Pandemic.

4   Brookings Institution Climage and Energy Economics Discussion Paper.

5   Fernando, R. and McKibbin, W. (October 2021). ADBI Series on Asian and Policy Sustainable Development. Macroeconomic Policy Adjustments due to Covid-19: Scenarios to 2025 with a Focus on Asia. COVID-19 Impacts and Policy Options: An Asian Perspective.

6   Kiely, K. (2021). Research Brief. Inequalities in Healthy Life Years in Australia. Ageing Futures Institute Research Brief.

7   Loxton, D., Townsend, N., Forder, P., Anderson, A., Barnes, I., Byrnes, E., Cavenagh, D., Egan, N., Tuckerman, K. and Byles, J. (2021). Report. Australia's Women's Mental Health and Wellbeing in the Context of the COVID-19 Pandemic in 2020. Report prepared for the Australian Government National Mental Health Commission.

8   Nazroo, J. and Bécares, L. (2021). Runnymede Briefing. Ethnic Inequalities in COVID-19 Mortality: A Consequence of Persistent Racism.

9   O'Loughlin, K. (July 2021). Online Module. Population Ageing. Abuse of the Older Person eLearning Program for Health and Aged Care Professionals.

10   Temple, J., Williams, R., Brooke, E., Souza, T., Knight, J. and Stiles, J. (2021). Metadata Database on Ageing Website Tool. doi: https://mspgh.unimelb.edu.au/centres-institutes/centre-for-health-policy/research-group/metadata-database

E3 PUBLISHED CONFERENCE ABSTRACT

1   Xu, Y., Phu, J., Aung, H.L., Hesam-Shariati, N., Auty, J., Keay, L., Tully, P.J., Booth, A., Anderson, C.S., Anstey, K.J. and Peters, R. (2021). Incidence and Prevalence of Coexistent Retinal Diseases and Cognitive Impairment or Dementia: A Systematic Review. *Alzheimers and Dementia. The Journal of the Alzheimer's Association.* 17, e055870. doi: https://doi.org/10.1002/alz.055870.

E4 UNPUBLISHED CONFERENCE PRESENTATIONS

1   Alonso Garcia, J. (May 2021). Taxation and Policyholder Behavior: The Case of Guaranteed Minimum Accumulation Benefits. UNSW School of Risk and Actuarial Studies. Sydney, Australia. Online.

2   Anstey, K. (November 2021). Examining the Relationship between Childhood Adversity and Mental Health in Older Adults. AAG Conference 2021. Sydney, Australia.

3   Anstey, K. (2021). Keynote Speaker. Will Promoting Brain Health also Prevent Dementia? Campus Alberta Neuroscience Third International Symposium, Promoting Healthy Brain Aging and Preventing Dementia International Symposium. Canada, May 2021, Online and Empower Annual Conference on Chronic Disease, National University of Malaysia, Malaysia, June 2021, Online.

4   Anstey, K. (May 2021). Association of Sex Differences in Dementia Risk Factors with Sex Differences in Memory Decline in a Population-based Cohort Spanning 20-76 years. Australian Dementia Forum. Australia. Online.

5   Anstey, K. (October 2021). Dementia Risk Assessment: Conceptual Issues and Tool Development. 2021 DCRC Dementia Prevention Conference. Australia. Online.

6   Anstey, K. (June 2021). Keynote Speaker. Intervention and Prevention in Neurodegenerative Disease: Building Resilience, University of Hong Kong. Hong Kong. Online.

7   Anstey, K. (September 2021). What can be Done Through Lifestyle and Dietary Modifications? Nutricia, Inaugural MCI Masterclass. Online.

8   Anstey, K. (December 2021). Cognitive Health Expectancies of Cardiovascular Risk Factors for Cognitive Decline and Dementia. Alzheimer's Disease International Conference. Online.

9   Baird, M. (June 2021). Reproductive Leave: What can Unions do for Workers, for Fertility and for Society. International Labour and Employment Relations Association Conference. Sweden. Online.

10   Baird, M. (June 2021). Impact of the COVID 19 Pandemic on Women. International Labour and Employment Relations Association Conference. Sweden. Online.

11   Bateman, H. (June 2021). Pensions: Emerging from Covid-19 and Beyond. 6th International Pension Research Association (IPRA) Conference. Sydney. Online.

12   Bateman, H. and Liu, J. (2021). Determinants of Early-Access to Retirement Savings: Lessons from the COVID-19 Pandemic. China International Conference on Insurance and Risk Management (CICIRM), July 2021, China, Online and Annual Meeting of the American Risk and Insurance Association (ARIA), August 2021, Online.

13   Bateman, H. and Liu, J. (2021). Impact of Mortgage Brokers on Consumer Preferences and Perceptions. China International Risk Forum, July 2021, China; Online, Experimental Finance World Conference 2021, June 2021, Austria, Online, and University of Sydney Business Financing and Banking Research Group Annual Workshop, November 2021, Online.

14   Bateman, H. (October 2021). Member Responses to Market Volatility. IBR Post Retirement Conference. Syndey. Australia.

15   Byles, J. (October 2021). Being Active Players in the Asia/Oceania Workshop. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

16   Byles, J. (November 2021). I am a Gerontologist but… 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

17   Byles, J. (November 2021). The Year of Living Bravely. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

18   Byles, Julie. (November 2021). Can we Die of Old Age? President's Symposium. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

19   Chung, S. (2021). Impact of Mortgage Brokers on Borrower's Preferences and Perceptions. Australian Conference of Economists (ACE) 2021 Annual Conference, July 2021, Online and Econometric Society Australasian Meeting 2021 (ESAM Annual Conference), July 2021, Online.

20 Deng, Y. (2021). Delay the Pension Age or Adjust the Pension Benefit? Implications for Labor Supply and Individual Welfare, 14th China Economics Summer Institute (CESI), August 2021, China, Online and 21st China Economics Annual Conference (CEAC), December 2021, China, Online.

21 Deng, Y. (December 2021). Gender Effect in Long-term Care: Evidence from China. 29th Colloquium on Pensions and Retirement Research. Sydney, Australia. Online.

22 Eberhardt, I. (December 2021). Understanding Members' Behavioural Responses to Market Volatility. 29th Colloquium on Pensions and Retirement Research. Sydney, Australia. Online.

23 Gerpott, F. (October 2021). Knowledge Transfer between Younger and Older Employees from a Social Comparison Per-spective. 6th Age in the Workplace Meeting, Groningen (NL). Groningen, The Netherlands and DGPs AOW Tagung Chemnitz, Germany.

24 Hamilton, M. (October 2021). New Directions in Centre based Aged Care in Australia: Responding to Changing Funding Models and the COVID 19 Pandemic. Australian Social Policy Conference. Online.

25 Hamilton, M. (July 2021). Retirement Outcomes for Older Single Women. Critical Tax Symposium. Online.

26 Hanewald, K. (2021). Multi-State Health Transition Modeling Using Neural Networks'. All-Actuaries Virtual Summit, May 2021, Online and Meeting of the American Risk and Insurance Association (ARIA), August 2021, Online.

27 Hanewald, K. (June 2021). Multi-population Modeling with Economic Trends: A Hybrid Neural Network Approach. Insurance Data Science Conference. Online.

28 Hanewald, K., Wan, C. and Bateman, H. (2021). Optimal Portfolio Choice with Longevity and Health Insurance Products: A Developing Country Context. University of Melbourne Actuarial Seminar, July 2021, Online; 14th International Health Economics Association (iHEA) World Congress, Jerusalem, Israel, July 2021, Online; Netspar International Pension Workshop, January 2021, Online, and The Inaugural IPRA Doctor Tutorial, Tilburg, Switzerland, May 2021, Online.

29 Ho, T.L. (May 2021). The Role of Housing Wealth for Retirement Planning. Actuaries Summit. Online.

30 Ho, T.L. (2021). Demand for Reverse Mortgages: Behavioral Explanations. American Risk and Insurance Association 2021 Annual Meeting, August 2021, Online, Asia-Pacific Risk and Insurance Association 2021 Annual Conference July 2021, Online and Insurance: Mathematics and Economics 2021 annual meeting, July 2021, Online.

31 Kabuche, D. (December 2021). Mortality Sharing in a Multistate Model of Functional Disability and Health Status. 29th Annual Colloquium on Pensions and Retirement Research. Online.

32 Kabuche, D. (July 2021). Returns Smoothing in Pooled Annuity Products. 24th International Congress on Insurance: Mathematics and Economics. Online.

33 Keane, M. (2021). Health Shocks and the Evolution of Earnings over the Life-Cycle. China Meeting of the Econometric Society. China, July 2021, Online, Econometric Society Australasian Meetings, July 2021, Melbourne, Australia, Online, Econometric Society Dynamic Structural Econometrics Conference, August 2021, Bonn, Germany, Online and Econometric Society North American Summer Meetings, June 2021, Quebec, Canada, Online.

34 Khalatbari-Soltani, S. (September 2021). The Prospective Association between Socioeconomic Status and Falls among Community-dwelling Older Men. World Congress of Epidemiology 2021. Sydney, Australia.

35 Kiely, K. (November 2021). Lifecourse Socioeconomic Position and Trends in Disability Free Life Expectancy. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

36 Kudrna, G. (December 2021). The Economy-wide Effects of Mandatory Superannuation and its Tax Concessions. 29th Colloquium of Pensions and Retirement Research. Sydney, Australia. Online.

37 Liu, J. (December 2021). Debt Illusion, Broker Usage, and Mortgages. 29th Colloquium on Pensions and Retirement Research. Sydney, Australia.Online.

38 Liu, J. (December 2021). Time-varying Risk Aversion and Investment Switching: Evidence from an Australian Superannuation Fund. 29th Colloquium on Pensions and Retirement Research. Sydney, Australia. Online.

39 Liu, J. (August 2021). Rate Regulation Revisited: Does Stringent Regulation Impact Insurance Prices? Annual Meeting of the American Risk and Insurance Association (ARIA), August 2021, Online and China International Conference on Insurance and Risk Management (CICIRM), July 2021, Online.

40 McDonald, P. (December 2021). Recent Fertility Decline in the Nordic and English-speaking Countries: Theoretical Considerations. 2021 International Population Conference. Online.

41 McDonald, P. (December 2021). Low Fertility Trends, Policies and Politics. 2021 International Population Conference. Online.

42 McDonald, P. (September 2021). Demography in the Intergenerational Report (IGR). Academy of Social Sciences Colloquium on the 2021 Intergenerational Report. Canberra, Australia.

43 McDonald, P. (November 2021). Collaborative Population Research In Asia. Asian Population Conference. Indonesia. Online.

44 McDonald, P. (December 2021). Demographic Training for the 21st Century. International Population Conference. Hydrabad, India. Online.

45 McKibbin, W. (December 2021). Presentation. Is there a Global Consensus in Stimulating New Growth Path. 10th Annual International Forum on Economic Development and Public Policy. Washington D.C., USA. Online.

46 McKibbin, W. (July 2021). Global Macroeconomic Scenarios of the COVID-19 Pandemic'. Australian Bureau of Statistics Conference - 2021 ABS Input Output User Group Workshop. Online.

47 McKibbin, W. (March 2021). Australian Leadership Retreat – Forging our future – The Next Steps. ADC Forum. Brisbane, Australia.

48 McKibbin, W. (April 2021). Challenges for Monetary Policy Central Banking in Challenging Times. Sri Lanka. Online.

49 McKibbin, W. (June 2021). Climate Change and Monetary Policy: Issues for Policy Design and Modelling. Climate Change, Macroeconomics and Finance Forum. Online.

50 Mitchell, O.S. (July 2021). Developments in Pension Design: Guarantees and Default Annuities. 24th International Congress on Insurance: Mathematics and Economics. Online.

51 Mitchell, O.S. (April 2021). Global Pension Challenge. FIAP ASOFONDOS Conference. Colombia, Bogota.

52 Mitchell, O.S. (January 2021). Pensiones y Seguro Social: Mitos, Realidades, Y Desafiós. Presentation for ICARE Conference. Santiago, Chile. Online.

53 Mitchell, O.S. (2021). The Future of Pensions Post-COVID. Superintendent of Peruvian Private Pension Fund Administrators Conference on The Pension Outlook. Lima, Peru.

54 Mitchell, O.S. (February 2021). Would Raising the Minimum Distribution Age for Retirement Accounts Enhance Old Age Security? The Savings and Retirement Foundation. Washington D.C. USA.

55 Nazroo, J. (August 2021). The Persistence of Inequalities in Later Life'. Flagship Symposium, Annual Conference of the British Society for Gerontology. Lancaster, England. Online.

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RESEARCH OUTPUTS

56 Nazroo, J. (May 2021). Ethnicity, Racism and Inequalities in Covid-19 Related Outcomes in the UK. Royal Statistical Society. Online.

57 O'Loughlin, K. (June 2021). Role of Healthcare Professionals in Supporting Digital Technology use for Successful Ageing in Place. 5th Transforming Care Conference. Online.

58 O'Loughlin, K. (April 2021). Moving beyond the Shower Chair: Supporting Digital Technology use for Successful Ageing in Place. Sustainable Care Conference. Online.

59 Olivieri, A. (June 2021). Modern Design of Life Annuities in view of Longevity and Pandemics. Statistical Italian Association (SIS) Conference 2021. Online.

60 Parker, S.K. (May 2021). Work Design and Individual Influences on Employee Experiences During The Pandemic. European Association of Work and Organizational Psychology (EAWOP) Virtual Conference. Online.

61 Parker, S.K. (April 2021). Sticking to Morning Work Routines while Working from Home During the COVID-19 Pandemic: The Good, the Bad, and the Ugly. 36th Annual Conference of the Society for Industrial and Organizational Psychology. Online.

62 Parker, S.K. (March 2021). Designing Work For a Digital World: An Applied Psychology Perspective. Spring Congress of the German Society for Industrial Engineering. Online.

63 Petery, G. (April 2021). Beyond AI and Automation: (Often overlooked) Challenges for the Future Work. The 36th Annual Conference for the Society for Industrial-Organizational Psychology. Online.

64 Piggott, J. (October 2021). Address the Aging of Population and Regulate the Development of Pension Insurance as the Third Pillar. Beijing Financial Street Conference. Online.

65 Piggott, J. (November 2021). Tapping into Australia's Ageing Workforce: Insights from Recent Research. Nikkei Super Active Aging Society Conference (SAAS). Tokyo. Online.

66 Pitacco, E. (September 2021). Revisiting Life Annuities. Croatian Actuarial Conference 2021. Zagreb, Croatia.

67 Shen, Y. (2021). Valuation of Guaranteed Minimum Maturity Benefits under Generalised Regime-switching Models using the Fourier Cosine Method. The 10th Annual Conference of Chinese Operational Research Society – Financial Engineering and Financial Risk Management Scheme, July 2021, Online and The 56th Actuarial (Virtual) Research Conference (ARC 2021), August, 2021, Online.

68 Shen, Y. (July 2021). Optimal Consumption and Annuity Equivalent Wealth with Mortality Uncertainty. The 24th International Congress on Insurance: Mathematics and Economics. Online.

69 Sherris, M. (May 2021). Managing Investment Volatility: Crashes, Covid-19 and Leverage Constraints. All Actuaries Virtual Summit 2021. Online.

70 Si, Y. (July 2021). Intrinsic Capacity: Validation of a New WHO Concept for Healthy Ageing. The 2021 China Health Policy and Management Society Symposium. Online.

71 Sinclair, C. (2021). Involving People Living with Dementia and Care Partners in Dementia Research. Dementia Centre for Research Collaboration, Capacity Building for Care Research Mentoring Group. Online.

72 Sinclair, C. (November 2021). Decision-making Sub-types among older Adults in the Personality and Total Health (PATH) Through Life Study. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

73 Sinclair, C. (November 2021). Navigation of Community-based Aged Care Services by Older People and their Families: A Scoping Review. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

74 Sinclair, C. (November 2021). Lower Rates of Advance Care Planning among Older Adults from Culturally and Linguistically Diverse Communities. 54th Australian Association of Gerontology (AAG) National Conference. Gold Coast, Australia. Online.

75 Sinclair, C. (August 2021). Promoting Inclusive Advance Care Planning in a Culturally Diverse Society: Lessons Learned In Australia. Advance Care Planning International Digital Exchange. Online.

76 Villegas, A. (October 2021). Estimating and Modelling Mortality Rates in the Absence of Population Data. International Actuarial Association Joint Section Virtual Colloquium. Online.

77 Wan, C. (2021). The Demand for Longevity, Health and Long-term Care Insurance in the COVID-19 Pandemic. 14th International Health Economics Association (iHEA) World Congress, July 2021, Jerusalem, Israel, Online, 24th International Congress on Insurance: Mathematics and Economics, July 2021, Online and Annual Conference of the Asia Pacific Risk and Insurance Association (APRIA), Jerusalem, Israel, July 2021, Online.

78 Wan, C. (2021). The Effects of Past and Current Air Pollution Exposure on Multimorbidity, Cognition, and Disability in China. 24th International Congress on Insurance: Mathematics and Economics, July 2021, Online, International Actuarial Association Life and Annuities Colloquium (IAALS), Ocotober 2021, Online and International Longevity Risk and Capital Markets Solutions Conference 2021, August 2021, Online.

79 Wang, Y. (December 2021). Innovative Combo Product Design Embedding Variable Annuity and Long-Term Care Insurance Contracts. 29th Colloquium on Pensions and Retirement Research. Online.

80 Wheadon, D. (July 2021). Pension Means Testing With Self-control Preferences. ESA's Australian Conference of Economists (ACE) 2021. Perth, Australia. Online.

81 Xiao, X. (May 2021). Deep Reinforcement Learning for Variable Annuities Hedging. All Actuaries Virtual Summit 2021. Online.

82 Xie, Y. (November 2021). Navigation of Community-based Aged Care Services by Older People and their Families: A Scoping Review. 54th Australian Association of Gerontology. Gold Coast, Australia. Online.

83 Yang, S. (November 2021). Tackling The Challenges of Old Age Care in Communities in China. Australian Social Policy Conference 2021. Sydney, Australia.

84 Zacher, H. (December 2021). Strength and Vulnerability: Indirect Effects of Age on Occupational Wellbeing through Emotion Regulation and Physiological Disease. Mature Workers in Organisations Virtual Symposium Series. Online.

SEMINAR PRESENTATIONS

1 Alonso Garcia, J. (May 2021). Taxation and Policyholder Behavior. UNSW School of Risk and Actuarial Seminar. UNSW Sydney. Online.

2 Alonso Garcia, J. (March 2021). Taxation and Policyholder Behavior: The Case of Guaranteed Minimum Accumulation Benefits. Quantact Seminar, Actuarial and Financial Mathematics Laboratory. Montreal, Canada.

3 Baird, M. (July 2021). Making the Law Work for Women. UTS Centre for Social Justice and Inclusion and the UTS Faculty of Law Webinar. Sydney. Online.

4 Batsuuri, T. (October 2021). Children Matter: Global Imbalances and Economics of Demographic Transition. ACDE PhD Seminar. Online.

5 Batsuuri, T. (October 2021). The Effect of Demographic Transitions on the Long-term Projections of Economic Growth and Emissions. Fox Fellowship Seminar. Online.

6 Byles, J. (September 2021). Accessing Cohort Data for Mental Health Research. Sax Forum – EMCR Initiative. Online.

7 Byles, J. (August 2021). Creating a Socially just, Inclusive and Age Friendly City. City of Newcastle and Hunter Ageing Alliance Workshop. Newcastle, Australia.

8   Chong, J. (June 2021). Mature Worker Interventions. Centre for Transformative Work Design Seminar. Online.

9   Chung, S. (June 2021). The Impact of Mortgage Brokers on Borrowers' Preferences and Perceptions. Pensions, Retirement and Ageing Seminar, UNSW Sydney. Sydney, Australia.

10   Deng, Y. (June 2021). Gender Effect in Long-Term Care: Evidence from China. School of Economics, UNSW Sydney. Online.

11   Deng, Y. (February 2021). Recovery from Mobility Limitations among Older Americans. Internal Seminars Term 1, School of Economics, UNSW Business School, Zoom meeting. Online.

12   Dinale, D. (September 2021). Institutional Interdependency: Explaining the Relationship between Female Labour Force Participation and Fertility Rates in Post-Industrial Nations. CEPAR Cross Nodal Seminar Series. Online.

13   Gerpott, F. (June 2021). How do I get Organisations to Take Part in my Intervention Research (and what happens if they say yes)? Learnings from Two Studies on Intergenerational Learning. CEPAR Mature Workers in Organisations Virtual Symposium Series. CEPAR. Sydney, Australia. Online.

14   Hamilton, M. (December 2021). New Directions in Centre-based Aged Care in Australia: Responding to Changing Funding Models and the COVID-19 Pandemic. Uniting Research and Social Policy Symposium. Online.

15   Hanewald, K. (May 2021). Willingness to take Financial Risks and Insurance Holdings: A European Survey. Pensions, Retirement and Ageing Seminar Series. UNSW Sydney. Online.

16   Hanewald, K. Wan, C. and Bateman, H. (May 2021). Retirement Eggs and Retirement Baskets. Pensions, Retirement and Ageing Seminar. CEPAR and School of Risk & Actuarial Studies. Sydney, Australia.

17   Kabuche, D. (September 2021). Mortality Sharing in a Multistate Model of Functional Disability and Health Status. School of Risk and Actuarial Studies PhD Seminar Series. UNSW Sydney. Online.

18   Katz, M. (November 2021). Ageing, Diet and Inflammation: An Australian Perspective. NeuRA Seminar Series. Online.

19   Keane, M. (July 2021). A New Perspective on Weak Instruments. UNSW Internal Seminar. UNSW Sydney. Online.

20   Keane, M. (2021). Health Shocks and the Evolution of Earnings over the Life-Cycle. University of Wisconsin Economics Department. Wisconsin, USA, April 2021, Online; Society for Economic Dynamics, Minneapolis, USA, July 2021, Online; Econometric Society Dynamic Structural Econometrics Summer School, Bonn, Germany, April 2021, Online; Toulouse School of Economics. Toulouse, France, September 2021, Online and USC Marshall School of Business, Los Angeles, USA, September 2021, Online.

21   Kiely, K. (May 2021). Social Disparities in Disability Free Life Expectancy Trends. School of Population Health, University of Sydney. Sydney, Australia.

22   Liu, J. (October 2021). Debt Illusion, Broker Usage, and Mortgages. University of Sydney Discipline of Finance Seminar. Online.

23   Liu, W.L. (July 2021). Global Demographic Change and International Capital Flows: Theory and Empirics. CEPAR Cross Nodal Seminar Series. Online.

24   Loh, V. (September 2021). Money matters, but what else? Mature worker motives by gender, age and age-inclusive HR practices. The University of Sydney Business School Discipline of Work and Organisational Studies Webinar. Online.

25   McKibbin, W. (May 2021). Global Macroeconomic Scenarios of the COVID-19 Pandemic. International Society for Pharmacoeconomics and Outcomes. Webinar. Online.

26   McKibbin, W. (April 2021). Central Banking in Challenging Times. Sri Lanka (online).

27   Olivieri, A. (July 2021). Designing Annuities in View of Longevity, Pandemics and Flexibility. School of Risk and Actuarial Studies. UNSW Sydney. Australia. Online.

28   Olivieri, A. (June 2021). Modern Design of Life Annuities in View of Longevity and Pandemics. Comitato Scientifico dell'Ordine degli Attuari Seminar. Italy. Online.

29   Pitacco, E. (November 2021). LTC Insurance Living Benefits: Risk Profiles. European Actuarial Academy Seminar. Online.

30   Shanker, A. and Dobrescu, I. (May 2021). Retirement Eggs and Retirement Baskets. Pensions, Retirement and Ageing Seminar. UNSW Sydney. Australia.

31   Thorp, S. (2021). Paying the Price for Bad Advice: The Role of Financial Vulnerability, Learning and Confirmation Bias. UNSW Sydney School of Banking and Finance Seminar. Sydney, Australia.

32   Wan, C. (2021). The Effects of Past and Current Air Pollution Exposure on Multimorbidity, Cognition, and Disability in China. CEPAR Cross Nodal Seminar Series. UNSW Sydney, July 2021, Online, and University of Melbourne Actuarial Seminar, Melbourne, September 2021, Online.

33   Wan, C. (October 2021). The Demand for Longevity, Health Insurance and Long-term Care Insurance in the Wake of the COVID-19 Pandemic. Risk Management and Insurance Forum, School of Insurance, Central University of Finance and Economics. Beijing.

34   Wan, C. (July 2021). The Effects of Past and Current Air Pollution Exposure on Multimorbidity, Cognition and Disability in China. CEPAR Cross-Nodal Seminar. Online.

COMMUNICATIONS, EDUCATION & COMMUNITY OUTREACH

33,559
WEBSITE HITS IN 2021
67,013 PAGE VIEWS

965
MEDIA ARTICLES
IN PRINT, RADIO,
TV & ONLINE MEDIA

14
MEDIA RELEASES
IN 2021

3,431
SOCIAL MEDIA FOLLOWERS
ON TWITTER,LINKEDIN,
YOUTUBE & FACEBOOK

IN 2021 THE CENTRE CONTINUED TO ENGAGE IN AN ONGOING DIALOGUE WITH, AND TRANSLATE AND DISSEMINATE ITS RESEARCH IN FORMS ACCESSIBLE TO, GOVERNMENT, INDUSTRY, ACADEMIA AND THE COMMUNITY.

WEBSITE AND RESOURCES

CEPAR's website is a key element of the Centre's public profile and continues to attract users. 23,769 people visited the website for 33,559 sessions. In particular, CEPAR continued to expand its reach overseas and in Australia by publicising its activities and research nationally and globally, resulting in a steady flow of website visitors from around the world. The largest proportion of website visitors continued to come from the USA, followed by visitors from Australia, China and the UK. 68 news items were published on the webpage. *People, Events and Publications* remained the top three most visited subpages of the site in 2021.

Throughout the year, CEPAR continued to publish a range of resources on its website to help the public understand the characteristics of population ageing.

The Centre released, on a rolling basis, further sets of data projections and estimates related to the composition and diversity of Australia's older population in the *CEPAR Population Ageing Futures Data Archive*, created by a team led by CEPAR senior researchers Jeromey Temple and Tom Wilson. Detailed projections are currently available for the Aboriginal and Torres Strait Islander population, Australia's migrant populations, and Australia's sexual minority population, as well as estimates of Australia's 'oldest-old' population and projections of how the COVID-19 pandemic affects population ageing in Australia. Over the coming years, CEPAR will be releasing further projections and estimates in relation to dementia, English language proficiency, religiosity, and detailed sub-national estimates of future ageing.

Another key initiative in 2021 was the launch of the online *Metadata Database on Ageing*, developed by a research team based at CEPAR's Melbourne School of Population and Global Health node and led by CEPAR Associate Professor Jeromey Temple. The Database includes metadata on Australian sample surveys that are relevant to ageing and assists researchers in identifying data collected for their specific research interest in ageing as well as understanding how the data is collected and how it can be accessed.

Another valuable web resource on population ageing is the 2016 published book *Population Ageing and Australia's Future* which was edited by CEPAR Chief Investigators Peter McDonald, John Piggott and the late Hal Kendig. According to the publisher ANU Press, the book had an incredible

12,000 downloads in the year 2021 alone. The volume provides evidence from many of Australia's leading scholars from a range of social science disciplines to support polices that address the challenges presented by Australia's ageing population.

NEWSLETTERS AND SOCIAL MEDIA

Other major channels of communication with the Centre's external stakeholders and the wider community are CEPAR's newsletters and social media accounts. The CEPAR newsletter is designed to provide subscribers with a regular update on CEPAR's activities in population ageing research. It is augmented by a special interest newsletter, focused on research about the mature workforce and organisations.

In 2021, CEPAR significantly expanded its subscribership by a third, and distributed 10 newsletter campaigns to its now over 2.2k subscribers (up from 1.7k subscribers in 2020). The Centre's social media presence and engagement on Twitter, LinkedIn, YouTube and Facebook also attracted new followers, with now over 3.4k followers and channel subscribers (up from 3.1k followers and subscribers in 2020).

To further increase the Centre's profile in population ageing research and expand its reach, CEPAR published over 30 (compared to 20 in 2020) edited video recordings of webinars, conference sessions and public talks onto its YouTube channel. The videos were featured in playlists

THE BOOK *POPULATION AGEING AND AUSTRALIA'S FUTURE,* EDITED BY CEPAR CHIEF INVESTIGATORS PETER MCDONALD, JOHN PIGGOTT AND THE LATE HAL KENDIG WAS DOWNLOADED OVER 12,000 TIMES IN 2021.

associated with the Centre's Policy Dialogue, Pensions, Retirement and Ageing Webinar Series, CEPAR Cross Nodal Webinar Series, the Colloquium on Pensions and Retirement Research, and the International Pension Research Association Conferences and Webinars.

MEDIA

In 2021, CEPAR's media strategy continued to focus on promoting the Centre's research findings and activities as well as providing expert commentary related to population ageing and policy settings required to support an ageing demographic. This year's contributions were particularly strong in the areas of mature workforce participation and workforce policy, aged care and care responsibilities, retirement incomes and outcomes, macro-demographic dynamics and demographic changes.

In addition, the Centre publicised a range of resources and reports which were released during the year and widely reported on in media, such as the fact sheet, *'Peak Performance Age in Sport';* the research brief, '*Tapping into Australia's Ageing Workforce: Insights from Recent Research*'; and the CEPAR industry report, *'An Employer Lens on COVID-19: Adapting to Change in Australian Workplaces'*.

In 2021, 14 media releases were issued by CEPAR, its university nodes and partners covering Centre research, expertise, and achievements, resulting in CEPAR researchers being featured in national and global media. A full list of media articles is provided on pages 117-123.

Regular appearances and op-eds by CEPAR researchers in the media, such as *The Australian Financial Review*, and commentary in online publications, such as *The Conversation*, additionally raised the profile of the Centre and its researchers as well as the issue of population ageing. (See Feature Box: Leading the Debate.)

MEDIA HIGHLIGHTS

MACRO-DEMOGRAPHIC DYNAMICS & POPULATION AGEING POLICY

CI Peter McDonald's expertise in demography was featured in national and global media, including the *ABC, Bloomberg, The Guardian, The Daily Telegraph, The Sydney Morning Herald,* and more, providing commentary on demographic changes, fertility rates, population data and trends, as well as migration policy.

CI Warwick McKibbin's macroeconomic expertise was featured in national and global media, including the *ABC, the Saturday Paper, the Sydney Morning Herald,* and more. He also published an opinion piece in *The Australian Financial Review* about how to end age and sex discrimination in JobMaker, the successor to JobKeeper.

CEPAR Principal Research Fellow Tom Wilson provided commentary on demographic data and changes as well as on population projections to *The Canberra Times, the SBS, Newcastle Herald, India Nation, The Age, MSN, Chinese Herald,* and more.

PRINCIPAL RESEARCH FELLOW TOM WILSON'S EXPERTISE ON POPULATION PROJECTIONS AND MIGRATION ANALYSIS WAS FEATURED IN NATIONAL AND GLOBAL MEDIA, INCLUDING SBS NEWS.

DECISION MAKING, EXPECTATIONS AND COGNITIVE AGEING

CI Kaarin Anstey's research on cognitive ageing and decline was featured in the *Science Magazine*. Her research on healthy ageing was featured in global and national news, including *heise online, Your Life Choices* and *2GB*.

CI KAARIN ANSTEY'S RESEARCH ON COGNITIVE AGEING AND DECLINE WAS FEATURED IN YOUR LIFE CHOICES.

CI Michael Keane provided commentary on long-term economic effects and population growth to T*he Sydney Morning Herald, Sydney Sun, Herald Globe, The New Daily*, and more.

Research Fellow Craig Sinclair's work on advance care planning was featured by national media, including the *ABC, 2SM* and *Hello Care*.

ORGANISATIONS AND THE MATURE WORKFORCE

Early in 2021 the research stream team released an industry report on *An Employer Lens on COVID-19: Adapting to Change in Australian Workplaces*, and appeared in several news publications and podcasts throughout the year, including *The Australian, HRM Magazine, The Sydney Morning Herald, Sky News* and *The Weekend Australian*.

CI Marian Baird's work on workplace policies was featured in several media, including the *ABC, The Sydney Morning Herald, The Age,* and more.

New challenge for nice bosses

Companies adapted their working arragements to help staff during COVID. But will they keep the faith?

CI Sharon Parker's research on the future of work and work design was featured by several media and podcasts, including *The Australian* and *The West Australian* among others.

Principal Research Fellow Myra Hamilton's work on care responsibilities and workplace policies was featured in the *ABC, The Age, The Sydney Morning Herald, Women's Agenda, 2SM,* and more.

THE FINDINGS OF CEPAR'S INDUSTRY REPORT 'AN EMPLOYER LENS ON COVID-19' WERE FEATURED IN SEVERAL NEWS PUBLICATIONS. PICTURED: MARIAN BAIRD IN THE AUSTRALIAN.

SUSTAINABLE WELLBEING IN LATER LIFE

Research on pensions and reverse mortgages, conducted by CI Hazel Bateman and her team, was featured in *The Age, The Sydney Morning Herald* and *Reverse Mortgage Daily*.

CI Michael Sherris provided commentary on risk modelling to *The Age, The Sydney Morning Herald*, and more. His learning-driven approach to mortality modelling was featured in *The Actuary,* the magazine of the Institute and Faculty of Actuaries.

Senior Research Fellow Rafal Chomik appeared on *ABC Radio National*, discussing aged care funding. He published an assessment of the 2021 Intergenerational Report in *The Conversation* which was republished in national and global media, including the *European Investment & Pensions Magazine, Firstlinks, Israel Herald, Beijing News, Hong Kong Herald, Sydney Sun*, and more.

Senior Research Fellow Bei Lu provided commentary on the China Population Census to the *ABC*.

The study, published in the *Australasian Journal on Ageing,* looked at 910 men with an average age of 80 from a 2013 follow up to the Concord Health and Ageing in Men Project.

It found that older men who are not home owners are more likely to report depressive symptoms, with depression the only health measure to show a statistically significant association with home ownership.

Dr Saman Khalatbari-Soltani

Research Fellow Saman Khalatbari-Soltani's research on vulnerabilities of older men was featured in the *Community Care Review*.

PICTURED: SAMAN KHALATBARI-SOLTANI IN THE COMMUNITY CARE REVIEW.

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LEADING THE DEBATE

CEPAR RESEARCHERS PUBLISHED FOUR ARTICLES IN *THE CONVERSATION*:

The successor to JobKeeper can't do its job, There's an urgent need for JobMaker II
Warwick McKibbin *et al.* - 7 April

The intergenerational report was sobering, but the reality may be worse
Rafal Chomik – 29 June

New research shows how hard it is for 'flying grannies' to care for their Australian grandkids
Myra Hamilton *et al.* – 27 October

Balancing work and fertility demands is not easy – but reproductive leave can help
Marian Baird *et al.* – 25 November

CEPAR RESEARCHERS PUBLISHED SEVEN OP-EDS AND COMMENTARIES:

Australia must have a new macroeconomic framework
Warwick McKibbin -
The Australian Financial Review, 3 February
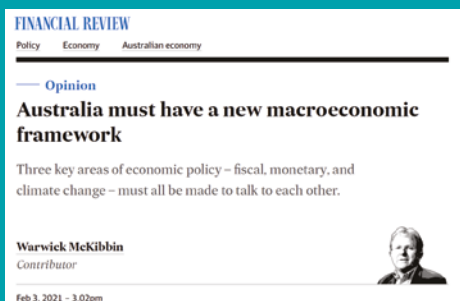
They died surrounded by family and friends (who could get leave from work if they needed)
Myra Hamilton *et al.* –
Croakey, 22 March
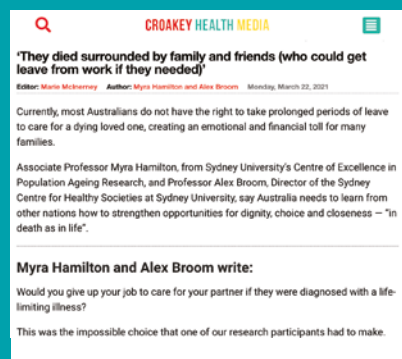
Time to end the sex discrimination in JobMaker
Warwick McKibbin *et al.* -
The Australian Financial Review, 29 March

Competition isn't improving the aged care sector
Anthony Scott *et al.* –
Pursuit, 21 April

Budget changes make Pension Loans Scheme more attractive to senior homeowners
Hazel Bateman, Katja Hanewald, Katie Sun -
UNSW BusinessThink, 12 May

Measure missing from budget that parents really needed
Marian Baird -
The Sydney Morning Herald, 18 May

IGR's population forecasts rest on 'brave' migration assumptions
Peter McDonald and Jeromey Temple -
The Australian Financial Review, 29 June

FACT SHEETS AND RESEARCH BRIEFS

The Centre's research briefs and fact sheets integrate research findings to present a synthesis of evidence pertaining to a particular area of knowledge or policy issue. Informed by a multidisciplinary knowledge base, the research briefs are written and presented in a format accessible to academia, business, the media and government, whereas fact sheets are designed to provide short informative summaries of key issues relevant to population ageing targeted at a general audience. These are not advocacy documents – instead they seek to be authoritative in their discussion of relevant research findings and provide a knowledge base for decision makers.

CEPAR research briefs retained ongoing popularity as a resource in 2021, with briefs being viewed over 2.1k times (up from 1.9k in 2020) and reported on in several media throughout the year. The top three research briefs of interest among website visitors were *Tapping into Australia's ageing workforce: Insights from recent research; Housing in an ageing Australia; and Aged Care in Australia: Part I – policy, demand and funding.*

In June 2021, timed to coincide with the Policy Dialogue event, CEPAR launched its newest research brief, titled, *'Tapping into Australia's ageing workforce: Insights from recent research'.* The brief features and synthesizes research on Australia's ageing workforce from more than 30 CEPAR researchers, some of whom presented recent findings at the Policy Dialogue event in Canberra. The research brief was featured in national media, including in *The Australian, The*

Canberra Times, Yahoo News, 7 News, Business Franchise Australia & New Zealand, The National Tribune, Inside Ageing, and more.

Also in June 2021, CEPAR published a fact sheet, *'How men age: Insights from the CHAMP Study',* which summarises some of the insights from the *Concord Health and Ageing in Men Project (CHAMP).* Led by former CI Emeritus Professor Robert Cumming, CHAMP is one of the most comprehensive studies of older men's health, describing the patterns of healthy and less-than-healthy ageing, and the factors related to each.

In August 2021, CEPAR released a fact sheet, *'Peak Performance Age in Sport',* analysing the ageing patterns in sports. It brings together existing literature and the latest data to illustrate the optimal ages at which physiology, training, and strategy combine for different sports and
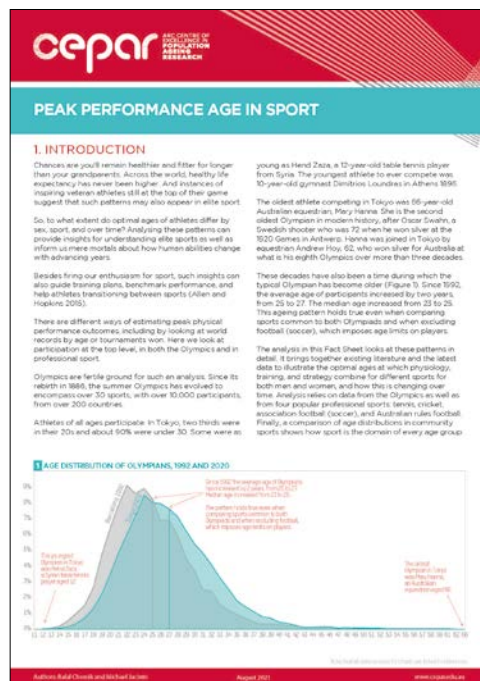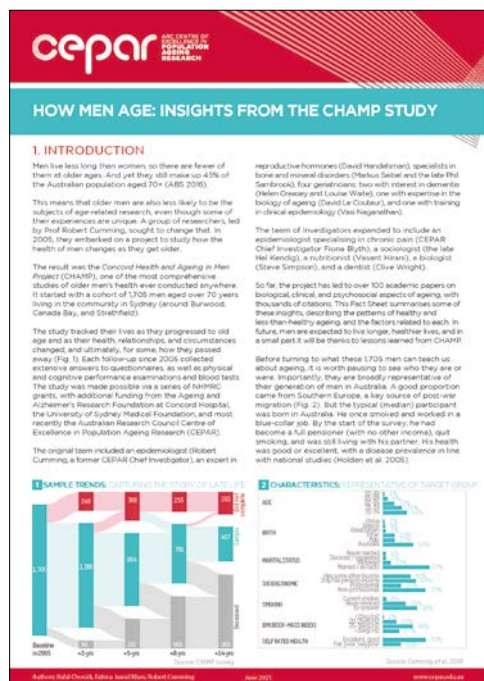
how this is changing over time. A comparison of age distributions in community sports shows how sport is the domain of every age group. The fact sheet analysis was covered by several media, including the *Australian Associated Press, Daily Mail, 7 News,* and more. The Australian Sports Commission included the CEPAR resource in their Daily News newsletter and also bookmarked it for consideration in relevant Knowledge Base topics.

INDUSTRY REPORT SERIES

The CEPAR Industry Report Series translates research findings for business practitioners and decisionmakers. In February 2021, CEPAR released the industry report, *'An Employer Lens on COVID-19: Adapting to change in Australian workplaces'*, which was featured in the media. The findings from CI Marian Baird and colleagues provide the first detailed analysis of how Australian employers have experienced and adapted to COVID-19, including how they have managed mature workers during COVID-19, based on in-depth interviews about experiences from 32 leaders at 28 organisations across Australia. The results have the potential to improve post-pandemic work experiences and lead to more inclusive working environments.

PUBLIC TALKS

In 2021, CEPAR continued to host cross nodal webinars for Centre personnel at which CEPAR researchers presented their latest work. Provided permission is given, recordings of the talks are publicised and available on the CEPAR website and its YouTube channel:

Health Burden in China: Effects of Past and Current Long-term Exposure to Air Pollution
Cheng Wan, CEPAR, UNSW Sydney – 21 July
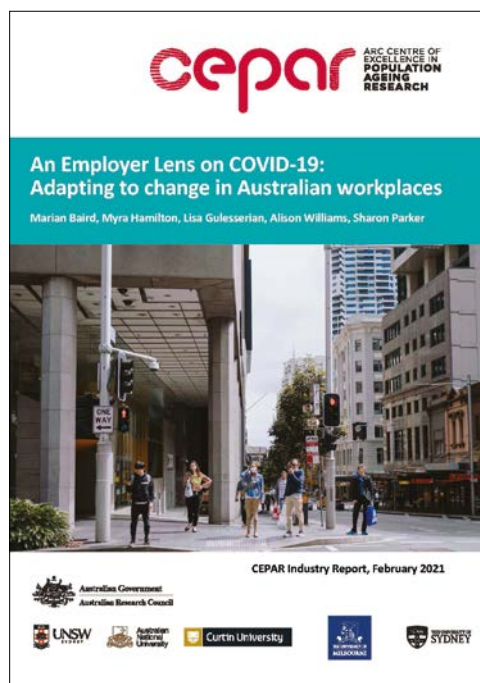
Global Demographic Change and International Capital Flows: Theory and Empirics
Dr Weifeng (Larry) Liu, CEPAR, ANU – 30 August

Institutional Interdependency: Explaining the Relationship between Female Labour Force Participation and Fertility Rates in Post-Industrial Nations
Daniel Dinale, CEPAR, UNSW Sydney – 30 September

CEPAR researchers were also invited to present in public fora in 2021. Highlights are provided below.

CI Kaarin Anstey delivered a keynote speech on cognitive ageing and decline at the University of British Columbia's Virtual Brain Health Symposium.

The Academy of the Social Sciences in Australia invited CI Marian Baird to present on reproductive leave policy at the Academy's 50th Anniversary Symposium.

CI Sharon Parker talked about the future of aged care and workforce planning required for Australia's ageing population as a panellist at the Business News Aged Care Sector Briefing at the Perth Convention and Exhibition Centre.

Researchers Vas Yiengprugsawan, Yuanyuan Deng and John Piggott presented their research on health and socioeconomic wellbeing of older persons in developing Asia at the regional conference of the Asian Development Bank (ADB), the Asian Development Bank Institute (ADBI), and the Japan International Cooperation Agency Ogata Sadako Research Institute (JICA Ogata RI).

MEDIA 2021

PRINT (NEWSPAPERS AND MAGAZINES)

Private obstetricians note spike in births among cashed-up couples - featuring Peter McDonald - *The Sydney Morning Herald* 16 January

Will hybrid teams reintroduce the workplace 'boys' club'? - featuring Marian Baird - *HRM* 20 January

Study highlights vulnerabilities of older men - featuring Saman Khalatbari-Soltani - *Community Care Review* 27 January

Australia must have a new macroeconomic framework - featuring Warwick McKibbin - *The Australian Financial Review* 3 February

Loans plan for virus-hit businesses after JobKeeper - featuring Warwick McKibbin - *The Australian* 5 February

Hybrid office a 'dangerous' model for companies - featuring Sharon Parker - *The Australian* 6 February

Invisible workers and gender equity - featuring Marian Baird - *The Australian* 7 February

Why hybrid workplaces bring a whole new set of challenges - featuring Sharon Parker - *The Weekend Australian* 9 February

'Benevolent' bosses face a fresh challenge after COVID – featuring Marian Baird – *The Australian* 19 February

New challenge for nice bosses - featuring Marian Baird - *The Australian* 20 February

Unsafe House - featuring Marian Baird - *The Saturday Age* 20 February

Single, childless, female and ageing: the grim future facing some Australian women - featuring Myra Hamilton - *Blue Mountains Gazette* 24 February

Labor gearing up to fight election on super, parental leave and climate policies - featuring Marian Baird - *The Sydney Morning Herald, Brisbane Times* 1 March

Participants sought for healthy ageing microbiome trial - Retail Pharmacy - featuring Milena Katz - *Retail Phamacy Magazine* 17 March

Australian billionaires doubled their wealth during Covid-19 - featuring Warwick McKibbin - *The Saturday Paper* 27 March

How to fix JobMaker - featuring Warwick McKibbin - *The Australian Financial Review* 29 March

Time to end the sex discrimination in JobMaker - by Warwick McKibbin - *The Australian Financial Review* 29 March

Baby bust as Sydney birth rates reach record lows - featuring Peter McDonald - *The Daily Telegraph* 9 April

Regions bloom as citysiders vote with feet - featuring Peter McDonald - *The Australian* 4 May

Improving your memory - featuring Kaarin Anstey - *Teacher Magazine* 8 May

Greys and wisdom behind the hidden childcare army - featuring Myra Hamilton - *The Sydney Morning* Herald 8 May

The many faces of grandma daycare - featuring Myra Hamilton - *The Saturday Age, Brisbane Times, The Age, The Sydney Morning Herald* 8 May

Tax hike needed to rein in deficit, bankers warn - featuring Warwick McKibbin - *NT News, The Courier-Mail, The Daily Telegraph, Herald Sun, The Chronicle, The Australian, The Advertiser, Weekly Times Now, Cairns Post, Geelong Advertiser, Townsville Bulletin, The Mercury* 15 May

Paid parental leave progress has plateaued, according to a new paper - featuring Marian Baird - *The Age, Brisbane Times, WA Today, The Sydney Morning Herald, The National Tribune* 16 May

Why John doesn't see many other dads at baby groups - featuring Marian Baird and Myra Hamilton - *The Sydney Morning Herald, The Age, Brisbane Times, WA Today* 16 May

The odd man out - featuring Marian Baird and Myra Hamilton - *The Sunday Age* 16 May

More must be done on parental leave - featuring Myra Hamilton - *The Sunday Age* 16 May

Sign of Omission: Parental leave fails to close the gap for mums and dads - featuring Marian Baird and Myra Hamilton - *The Sun Herald* 16 May

Measure missing from budget that parents really needed - by Marian Baird - *The Sydney Morning Herald, The Age, WA Today, Brisbane Times* 18 May

Call to limit wage rises for low-paid workers - featuring Warwick McKibbin- *The Australian, The Australian Chinese Edition* 19 May

Self-perception on age and gender study underway - featuring Kaarin Anstey and Brooke Brady - *Retail Pharmacy Assistants, Retail Pharmacy Magazine* 26 May

Studies test lifestyle changes to avert dementia - featuring Kaarin Anstey - *Science Magazine* 28 May

Top economists think much further ahead than Morrison and Frydenberg - featuring Warwick McKibbin and Mike Keane - *The Sydney Morning Herald, WA Today, Brisbane Times, The Age* 30 May

Paid leave for periods and menopause will improve gender equality - featuring Marian Baird – *WA Today, Brisbane Times, The Age, The Sydney Morning Herald* 2 June

Paid leave for periods critical for equality - Featuring Marian Baird - *Sydney Morning Herald* 3 June

Could job crafting be key to retaining top talent? - Featuring Sharon Parker - *HRM* 9 June

Older, poorer, less productive: Australia's demographic challenge - featuring Peter McDonald - T*he Australian Financial Review* 12 June

Parents cobble together childcare options and make their work fit - featuring Marian Baird - *WA Today, Brisbane Times, The Sydney Morning Herald* 17 June

Striking a balance - Featuring Marian Baird - *The Age* 17 June

Women working full-time leading post-Covid jobs recovery - featuring Marian Baird - *The Australian* 17 June

Jobs recovery driven by women - featuring Marian Baird - *The Australian* 18 June

Australian companies grant female workers paid menstrual, menopausal leave - featuring Marian Baird New - *New Zealand Herald* 25 June

Over 55s critical to future workforce - featuring Rafal Chomik, Marian Baird, Sharon Parker - *The Canberra Times, The Esperance Express, Donnybrook-Bridgetown Mail, Augusta Margaret River Mail, Daily Mail, Merimbula News Weekly, The Queanbeyan Age, Daily Liberal, The Courier, Newcastle Herald, Campbelltown Macarthur Advertiser, Blue Mountains Gazette, Canowindra News, Gloucester Advocate, The North West Star, Fairfield City Champion, The Young Witness, Yass Tribune, Harden Murrumburrah Express, Manning River Times, Eastern Riverina Chronicle, Mandurah Mail, Busselton-Dunsborough Mail, Liverpool City Champion, Camden-Narellan Advertiser, The Macleay Argus, Katherine Times, The Rural, Milton Ulladulla Times, Blayney Chronicle, Coly Point Observer, Namoi Valley Independent, Lithgow Mercury, Narromine News, The Daily Advertiser, Cowra Guardian, Illawarra Mercury, The Northern Daily Leader, Wellington Times, Northern Beaches Review, Oberon Review, Great Lakes Advocate, Bendigo Advertiser, Southern Highland News, Hunter Valley News, Muswellbrook Chronicle, Narooma News, The Canberra Times, Cessnock Advertiser, Port Macquarie News, The Times - On The Coast, Hawkesbury Gazette, Camden Haven Courier, Goulburn Post, The Naracoorte Herald, The Advocate - Hepburn, Goondiwindi Argus, Inverell Times, The Maitland Mercury, Port Lincoln Times, Dungog Chronicle, The Murray Valley Standard, Whyalla News, The Wimmera Mail-Times, Port Stephens Examiner, Stawell Times-News, The Scone Advocate, Western Magazine, The Flinders News, Coastal Leader, Bay Post, The Area News, Mudgee Guardian, Forbes Advocate, Western Advocate, Parkes Champion-Post, Beaudesert Times, Southern Cross, The Singleton Argus, Tenterfield Star, Bega District News, Glen Innes Examiner, Boorowa News, Braidwood Times, Redland City Bulletin, The Armidale Express, Ararat Advertiser, Grenfell Record, St George & Sutherland Shire Leader, The Standard, Bunbury Mail, South Coast Register, Northern Rivers Review, The Border Mail, The Transcontinental, The Recorder, The Islander, Wollondilly Advertiser, Central Western Daily, The Examiner, Magnet, Border Chronicle, The Advocate, The Irrigator, Cootamundra Herald, Moree Champion, Perth Now, Sound Telegraph, Busselton Dunsborough Times, The West Australian, Daily Mail, Jimboomba Times, The McIvor Times, Seymour Telegraph, Minority Reporter, The Westside Gazette, The Middle East North Africa Financial Network* 27 June

COMMUNICATIONS, EDUCATION & COMMUNITY OUTREACH

Pandemic workplace flexibility attracts more women to labour force - featuring Marian Baird - *The Sydney Morning Herald, WA Today, The Age, Brisbane Times* 28 June

Pandemic switch to flexible work drives jobs boom for women - featuring Marian Baird - *The Brisbane Time, The Sydney Morning Herald, The Age, WA Today* 28 June

Australian companies grant their female workers paid menstrual and menopausal leave - featuring Marian Baird - *News.com.au, The Daily Telegraph, The Advertiser, The Chronicle, Herald Sun, The Courier-Mail, Townsville Bulletin, Ntnews.com.au, The Mercury, Geelong Advertiser, Cairns Post, Gold Coast Bulletin, The New Zealand Herald, News Chant, Vietnam Explorer News Channel* 25 June

IGR's population forecasts rest on 'brave' migration assumptions - by Peter McDonald and Jeromey Temple - *The Australian Financial Review* 29 June

More women in work a win for families, economy - featuring Marian Baird - *Sydney Morning Herald* 29 June

Retirees flock to reverse mortgages to tap equity in their homes - featuring Hazel Bateman, Katja Hanewald – *The Sydney Morning Herald, Brisbane Times, WA Today, The Age* 6 July

More migrants mean lower pay – featuring Peter McDonald – *The Australian Financial Review* 12 July

Online platform aims to improve management of early dementia – featuring Kaarin Anstey – *Retail Pharmacy Magazine, Retail Pharmacy Assistants* 12 July

Economists on Immigration v Wages – featuring Mike Keane – *Tasmanian Times* 4 August

ABS reports a record number of people are leaving Australia's capital cities – featuring Tom Wilson – *Boorowa News, Ararat Advertiser, Great Lakes Advocate, Milton Ulladulla Times, Braidwood Times, Port Stephens Examiner, Whyalla News, Northern Rivers Review, The Canberra Times, Stawell Times-News, Manning River Times, Blue Mountains Gazette, Camden Haven Courier, Wollondilly Advertiser, Lithgow Mercury, Tenterfield Star, The Advocate – Hepburn, Mandurah Mail, Beaudesert Times, Katherine Times, Merimbula News Weekly, The Queanbeyan Age, The Esperance Express, Augusta Margaret River Mail, Gloucester Advocate, Canowindra News, The Examiner Western Magazine, Port Lincoln Times, The Islander, Narooma News, Daily Liberal, Hawkesbury Gazette, Camden-Narellan Advertiser, Forbes Advocate, Illawarra Mercury, Narromine News, The Young Witness, The Maitland Mercury, Moree Champion, The North West Star, Glen Innes Examiner, Bunbury Mail, Harden Murrumburrah Express, Coastal Leader, The Murray Valley Standard, Goulburn Post, Namoi Valley Independent, Yass Tribune, Border Chronicle, Newcastle Herald, Bega District News, Magnet, Wellington Times, Eastern Riverina Chronicle, Parkes Champion-Post, Central Western Daily, Northern Beaches Review, Bendigo Advertiser, The Courier, Busselton-Dunsborough Mail, Cowra Guardian, The Area News, St George & Sutherland Shire Leader, The Irrigator, Liverpool City*

Champion, Campbelltown Macarthur Advertiser, Port Macquarie News, South Coast Register, The Rural, The Border Mail, The Advocate, Grenfell Record, The Armidale Express, Goondiwindi Argus, Fairfield City Champion, The Northern Daily Leader, The Flinders News, The Scone Advocate, Cessnock Advertiser, The Recorder, Oberon Review, Muswellbrook Chronicle, Blayney Chronicle, The Wimmera Mail-Times, Coly Point Observer, The Naracoorte Herald, Hunter Valley News, The Transcontinental, Mudgee Guardian, The Singleton Argus, Dungog Chronicle, Jimboomba Times, The Times - On The Coast, Cootamundra Herald, The Daily Advertiser, Southern Cross, The Standard, The Macleay Argus 4 August

People are leaving capital cities at record rates, but where are they going? – featuring Tom Wilson - *Bay Post, Redland City Bulletin* 4 August

Number of older mums giving birth in Australia doubles in 20 years - featuring Marian Baird - *West Australian, Pilbara News, Midwest Times, Sound Telegraph* 5 August

My boss makes me feel guilty for maternity leave - featuring Marian Baird – *The Sydney Morning Herald, The Age, WA Today, Brisbane Times* 6 August

'Echos of the White Australia policy': Minister wants national discussion on population – featuring Peter McDonald – *The Sydney Morning Herald, The Age, WA Today, Brisbane Times* 6 August

Olympians are ageing and winning – featuring Rafal Chomik – *Seymour Telegraph, Yarrawonga Chronicle, The Corowa Free Press, The McIvor Times, Jimboomba Times, Daily Mail, The West Australian, Perth Now, Cowra Guardian, Redland City Bulletin, The Macleay Argus, Katherine Times, Namoi Valley Independent, The Armidale Express, The Transcontinental, Western Advocate, Port Lincoln Times, Western Magazine, Hawkesbury Gazette, Whyalla News, Bay Post, Gloucester Advocate, Narromine News, Port Stephens Examiner, Fairfield City Champion, Manning River Times, The North West Star, The Advocate, The Naracoorte Herald, The Murray Valley Standard, The Canberra Times, Muswellbrook Chronicle, Busselton-Dunsborough Mail, Border Chronicle, The Singleton Argus, Oberon Review, Lithgow Mercury, Camden Haven Courier, Narooma News, Great Lakes Advocate, The Young Witness, Camden-Narellan Advertiser, Bega District News, Yass Tribune, Liverpool City Champion, Braidwood Times, Cessnock Advertiser, Southern Highland News, Wollondilly Advertiser, The Scone Advocate, The Irrigator, The Courier, Bendigo Advertiser, Mandurah Mail, Mudgee Guardian, St George & Sutherland Shire Leader, Coly Point Observer, Campbelltown Macarthur Advertiser, The Maitland Mercury, The Rural, The Islander, Canowindra News, Tenterfield Star, Glen Innes Examiner, Goulburn Post, Parkes Champion-Post, Northern Beaches Review, Central Western Daily, Bunbury Mail, Cootamundra Herald, The Flinders News, The Recorder, Goondiwindi Argus, The Border Mail, The Wimmera Mail-Times, Northern Rivers Review, Hunter Valley News, Beaudesert Times, Blayney Chronicle, Daily Liberal, Newcastle Herald, The Area News, Wellington Times, The Examiner, Moree Champion, Boorowa News, Magnet, Milton Ulladulla Times, Stawell*

Times-News, Southern Cross, Port Macquarie News, The Daily Advertiser, Coastal Leader, Dungog Chronicle, The Times - On The Coast, The Advocate – Hepburn, Harden Murrumburrah Express, South Coast Register, Ararat Advertiser, Eastern Riverina Chronicle, The Northern Daily Leader, Grenfell Record, Inverell Times, Illawarra Mercury, Forbes Advocate, Blue Mountains Gazette, The Standard, The Queanbeyan Age, Merimbula News Weekly, Australian Senior, The Esperance Express, Augusta Margaret River Mail, Western Advocate 15 August

Newcastle catering for ageing population in city planning - Featuring Byles Julie - *Newcastle Weekly* 17 August

Long COVID and careers: Curbing work risks mothers' economic security – featuring Marian Baird – *Brisbane Times, The Sydney Morning Herald, WA Today, The Age* 2 September

Perrottet backs 'big NSW' as immigration debate heats up – featuring Peter McDonald – *The Australian Financial Review* 13 October

The great resignation: Why Australians will soon start quitting their jobs in droves – featuring Sharon Parker – *Midwest Times, The West Australian, Pilbara News, Albany Advertiser* 25 October

Around the Block: Learning-Driven Approach to Mortality Modelling – featuring Andrés Villegas, Salvatory Kessy, Michael Sherris, Dilan SriDaran and Jonathan Ziveyi - *The Actuary,* 3 November

Big Melbourne is coming back, but do we still want it? - featuring Peter McDonald - *Brisbane Times, The Sydney Morning Herald, The Age, WA Today* 7 November

Migration sugar boost needs careful consideration – featuring Peter McDonald – *The Age* 7 November

These 40 researchers are lifetime achievers in their fields – featuring Sharon Parker – *The Australian* 10 November

A bloody revolution: How periods got political - featuring Marian Baird – *The Sydney Morning Herald, Brisbane Times, The Age, WA Today* 12 November

Let it bleed - featuring Marian Baird - *Sydney Morning Herald, The Saturday Age* 13 November

Manning up in the bedroom - featuring Marian Baird - *Sunday Times* 14 November

Men may soon take control of contraception with new 'testicle bath' gadget - featuring Marian Baird - *The West Australian, Margaret River Times, Albany Advertiser* 14 November

Will the Workplace Gender Equality Act be further eroded by Morrison government? - featuring Marian Baird - *Canberra Times* 19 November

Less compliance not the answer on equality - featuring Marian Baird - *Newcastle Herald* 20 November

Interview regarding digital health - featuring Brooke Brady - Soft Stir Magazine December

The challenge of not having one for mum, dad, and the country – featuring Peter McDonald – *The Australian Financial Review* 10 December

Fertile time to deliver Baby Bonus 2.0? – featuring Marian Baird – *The Australian* 10 December

Housing affordability crisis leading to fewer babies – featuring Peter McDonald – *The Australian Financial Review* 11 December

TELEVISION, RADIO AND PODCASTS

Redesigning Post-Pandemic Work Life - featuring Sharon Parker - *The Leadium Podcast: Nourishing Busy Leaders with Expert Insights* 5 January

Paul Murray Interview with Professor Sharon Parker - featuring Sharon Parker - *Sky News Live* 11 January

Podcast on Climate, the coronavirus, and the costs of uncertainty - Featuring Warwick McKibbin - *Democracy Sausage: Climate, the coronavirus, and the costs of uncertainty* 9 February

Migrant Australians struggling with young families as covid bans visits from overseas grandparents - featuring Myra Hamilton - *ABC Radio AM* 10 February

How to use SMART Work Design to help your team thrive in the Future of Work - featuring Sharon Parker - *Lean Mean Marketing Teams podcast* 16 February

Fixing aged care funding - featuring Rafal Chomik - *ABC Radio National* 27 February

The Coaching Academic podcast episode 38 'Effective remote working' - featuring Sharon Parker - *The Coaching Academic Podcast* 11 March

Episode 22: A Conversation with Sharon Parker - featuring Sharon Parker - *SIOP Conversation Series podcast* 31 March

Afternoon Briefing - Patricia Karvelas discusses the top stories with Warwick McKibbin and others - Featuring Warwick McKibbin - *ABC* 20 April

Your Life Choices podcast - featuring Kaarin Anstey - *Your Life Choice* 26 April

An older China may be more unequal, too - featuring Peter McDonald - *Bloomberg* 4 May

How many Melburnians fled to the regions last year - featuring Peter McDonald - *3AW* 5 May

Interview on Australian population trends - Featuring Peter McDonald - *ABC Sydney, ABC Coffs Harbour* 5 May

Advance Care Planning: End-of-life crisis looms for older Australians without advance care planning - featuring Craig Sinclair - A*BC Radio, 2SM Sydney, Hope FM, Bathurst Radio 2BS, ABC Mid North Coast* 6 May

Aussie researchers are calling for major changes to paid parental leave to ensure the scheme - featuring Marian Baird - *2WS-FM* 17 May

Afternoon with James Valentine - featuring Myra Hamilton - *ABC 702* 17 May

Gender equality and paid parental leave in Australia: A decade of giant leaps or baby steps? - featuring Marian Baird - *2SM News* 18 May

How the immigration slump due to COVID-19 will impact Australia - featuring Peter McDonald - *3AW* 19 May

Failure to improve the 10-year-old paid parental leave scheme has entrenched gender inequality at work and home - featuring Marian Baird - *ABC Radio Illawarra* 19 May

Gender equality and paid parental leave in Australia - Featuring Myra Hamilton - *ABC Central West NSW, ABC South East NSW, ABC Newcastle* 19 May

Discussion of what the Federal Budget provides for women and families -featuring Marian Baird - *ABC Radio Sydney Breakfast* 19 May

Rheinberger recollects the arguments about parental leave when it was about to be introduced some 10 years ago - featuring Marian Baird - *ABC Illawarra* 19 May

China's pension funds face rising risks - featuring Hanewald Katja - *Broadcast Retirement Network* 20 May

Comments on launch of Labs Without Walls study - featuring Brooke Brady - *2SM, 2AD* 27 May

Podcast: Professor Kaarin Anstey explains the facts about dementia - featuring Kaarin Anstey - *Your Life Choices* 29 May

Menopause - the last workplace taboo? - featuring Marian Baird - *Player FM* 29 June

Business Daily - Menopause - the last workplace taboo? – featuring Marian Baird - *BBC-World Service Radio* 29 June

Australia 2060: older, smaller and more in debt – featuring John Piggott – *ABC News, The Economists* 1 July

Population Overview - featuring Peter McDonald - *CNA TV, Singapore* 9 July

Researchers aim to improve self-management of early-stage dementia through innovative online platform - Featuring Kaarin Anstey - *2GB* 12 July

Trend one in four Australian mothers are giving birth over 35yo - Featuring Marian Baird - *Oliver Peterson Perth Live 6PR* 5 August

How a lack of new migrants in Australia will impact the 2021 Census figures – featuring Tom Wilson – *SBS* 5 August

Grandparent care - Featuring Myra Hamilton - *ABC Radio Darwin* 31 October

Interview on rising life expectancies in Australia - featuring Kim Kiely - *10 News First* 5 November

Teen-ternity Leave: Do Parents Need Time Off To Support Older Kids? - Featuring Marian Baird - *MamaMia* 9 November

Interview on the fall in the birth rate in China - Featuring Mcdonald Peter - *BBC World News* 25 November

ONLINE

Slowing the decline into dementia - featuring Kaarin Anstey - *Your Life Choices* 7 January

Decade of Healthy Ageing – featuring John Beard - *Guyana Times* 7 January

Small business support in 2021? Experts propose HECS-style loans after JobKeeper - featuring John Piggott - *Mozo* 14 January

In Utero Air Pollution Exposure Tied to Poorer Cognition Later in Life - featuring Kaarin Anstey – *Medscap* 1 February

Australia must have a new macroeconomic framework – by Warwick McKibbin – *Policy Forum* 4 February

What happens to businesses after JobKeeper ends? The Ministry of Finance considers offering concessional loans – featuring Warwick McKibbin - *1688* 4 February

HECS-style loan scheme could prove a lifeline for businesses says ombudsman – featuring Warwick McKibbin – *Kochie's Business Builders* 4 February

Empowering a person's decision making - featuring CEPAR - *Legalwise* 3 February

Bless retirement living cost - featuring CEPAR - *Efedrina* 5 February

Here are three strategies for buying annuities for retirement income when rates are low - featuring Olivia Mitchell - *Barron's* 7 February

Employers key to Work/Life Balance during COVID-19 – featuring Myra Hamilton, Marian Baird - *Targeted News Service* 8 February

Retirement Income Review under spotlight - featuring John Piggott and Hazel Bateman - *Mirage News, Australian Senior News* 9 February

Grandparents help to raise grandchildren in many families, but coronavirus is changing that - featuring Myra Hamilton - *ABC Online, Press Forum* 10 February

China birthrate slumps as experts blame changing attitudes - featuring Peter McDonald - *The Guardian* 10 February

Angka kelahiran di China merosot 15% pada tahun 2020 - featuring Peter McDonald - *Zona Atura* 11 February

Perempuan Tak Terlalu Ambil Pusing dengan Pernikahan, Angka Kelahiran di China Turun - featuring Peter McDonald – *Sinarharapan* 11 February

Rekordlågt antal födslar oroar\nkinesiska kommunistledarna - featuring Peter McDonald – *Expressen* 11 February

In utero air pollution exposure tied to poorer cognition in later life - featuring Kaarin Anstey - *Medscape* 19 February

Single, childless, female and ageing - the grim future facing some Australian women - Featuring Myra Hamilton - *The Senior* 20 February

Government, experts put future retirement income policy under microscope – including superannuation, pensions, and housing - *Mirage News* 25 February

Are retirement savings still a priority? - featuring Olivia Mitchell - *Canadian HR Reporter* 2 March

Give pension certainty to lift drawdown rate – featuring Hazel Bateman - *Self-Managed Super Magazine* 3 March

7 ways to keep your brain fighting fit as you get older – featuring Kaarin Anstey – *Defence Health* 4 March

Rekordlågt antal födslar oroar kinesiska kommunistledarna - featuring Peter Mcdonald - *Expressen* 4 March

The many roles of women – International Women's Day 2021 - Featuring Byles Julie - *ABC Radio Newcastle* 8 March

Loans Online – Interest-free COVID loans for SMEs - featuring Warwick McKibbin - *Fintech Zoom* 9 March

SMEs set to receive revenue-contingent loans in post-JobKeeper support package - featuring Warwick McKibbin - *SmartCompany* 10 March

Are women delaying pregnancy because of the pandemic? – featuring Peter McDonald – *Primer* 13 March

Appointments, achievements – featuring Kaarin Anstey, Hazel Bateman – *Campus Morning Mail* 15 March

Helping our elderly – featuring John Beard - *Guyana Times* 13 March

'They died surrounded by family and friends (who could get leave from work if they needed)' - by Myra Hamilton - *Croakey* 22 March

Is there a future for Australia's fly-in fly-out mining workers? - featuring Sharon Parker and Daniela Andrei - *Mining Technology* 23 March

Immunization strategies for funding multiple inflation-linked retirement income benefits – featuring Michael Sherris - *Multidisciplinary Digital Publishing Institute* 25 March

Gender pay gap may not close for 26 years – featuring Marian Baird – *ABC News* 26 March

Baby boomers sought for the FAITH healthy ageing trial - Featuring Milena Katz - *The Senior, Australia Food News* 29 March

Replace JobKeeper with a better and fairer JobMaker - by Warwick McKibbin - *Asia & the Pacific Policy Forum* 31 March

How housing policy and retiree wealth are shifting the super conversation - featuring CEPAR - *The Motley Fool* 6 April

The successor to JobKeeper can't do its job, There's an urgent need for JobMaker II - by Warwick McKibbin - *The Conversation* 7 April

'Zoom Zombies' Are the Driving Dead – featuring Sharon Parker - *TheDetroitBureau.com* 8 April

Sydney's baby birth rate fell to a record low – featuring Peter McDonald – 手机搜狐网, 搜狐新闻–搜狐, 1688网, 今日墨尔本 *Autongcheng* 11 April

Olivia Mitchell on Wharton Business Daily - featuring Olivia Mitchell - *Wharton Business Daily* 13 April

New trial aims to reduce frailty and improve mental health by connecting older Australians and preschoolers – featuring Kaarin Anstey - *Australian Associated Press, What's On Australia, News Today, Aboutpain, The National Tribune, Mirage News, Medianet* 19 April

Trial connects older Australians and pre-schoolers to improve mental health - featuring Kaarin Anstey - *UNSW Newsroom* 20 April

Trial to study health benefits of bringing young and old together – featuring Kaarin Anstey – *Australian Senior News* 20 April

Real life 'Old people's home for four year olds' study being trialled – featuring Kaarin Anstey – *Aged Care Guide* 20 April

New Alliance To Make The Hunter An Age Friendly Community - Featuring Byles Julie - *MidCoast Online News* 20 April

Connecting older Australians and pre-schoolers to improve mental health – featuring Kaarin Anstey – *Open Forum* 21 April

Reduce frailty and improve mental health by connecting older Australians and preschoolers - featuring Kaarin Anstey – *SeniorAu* 21 April

Competition isn't improving the aged care sector – by Anthony Scott – *Pursuit, Open Forum, SeniorAu* 21 April

Funding Success – World Class Research Project Grants – featuring Kaarin Anstey – *Mirage News, The National Tribune* 21 April

Interview - featuring Warwick McKibbin - S*abin Vaccine Institute* 22 April

How Taxes are sending housing prices through the roof – featuring Peter McDonald, Jeromey Temple – *Quadrant Online* 29 April

No jobs, lack of diversity among the challenges in this seaside town where trains only go one way - featuring Peter McDonald - *ABC News, MSN NZ, MSN Australia, PressForm* 2 May

What's behind the male-female financial-literacy gap? These academics say they've found an answer - featuring Olivia Mitchell - *MarketWatch* 3 May

The 'women's budget' is still yet to drop. But we already know it won't tackle one of the 'defining gender equality issues of our time' - featuring Marian Baird – *Women's Agenda* 6 May

Majority of older Australian's 'sidestepping' end-of-life care - featuring Craig Sinclair - *RACGP* 6 May

End-of-life advanced care planning ranks lower for men, national study finds - featuring Craig Sinclair - *The Mandarin* 6 May

70% of Australians have no end-of-life care plan: Why are so many leaving it to chance? - featuring Craig Sinclair - *Hello Care* 6 May

Top economists back boosts to JobSeeker and social housing over tax cuts in pre-budget poll - featuring Warwick McKibbin - *The Middle East North Africa Financial Network* 7 May

'Could do better': top Australian economists award the budget a cautious pass - featuring Warwick McKibbin - *MENAFN* 7 May

7 things Australian women need from the 2021 Budget - featuring Marian Baird - *Yahoo!7 Finance* 7 May

Super agers changing the definition of ageing – featuring Kaarin Anstey – *Your Life Choices* 7 May

The 'women's budget' is still yet to drop. But we already know it won't tackle one of the 'defining gender equality issues of our time' – featuring Marin Baird - *Women's Agenda* 7 May

China's census shows its 'hukou' system is a barrier to future economic gains - featuring Peter McDonald - *Fortune, Yahoo! Finance* 11 May

China releases once-in-a-decade census data showing falling population growth - featuring Bei Lu - *ABC News* 11 May

AUSTRALIAN WOMEN: This is what the Budget delivered for you - featuring Marian Baird - *Yahoo!7 Finance* 11 May

Mortgage Rates Today – Budget changes make Pension Loans Scheme more attractive to senior homeowners - featuring CEPAR - *Fintechzoom* 12 May

VC's update – Federal Budget 2021 - featuring Warwick McKibbin - *Australian National University* 12 May

Budget changes make Pension Loans Scheme more attractive to senior homeowners - by Hazel Bateman, Katja Hanewald, Katie Sun - *UNSW BusinessThink, Mirage News, The National Tribune* 13 May

Major trends affecting Australians reaching retirement - featuring CEPAR - *Your Life Choices* 13 May

How does the budget and budget reply compare? - featuring Marian Baird - *ABC News* 14 May

Want to Live Longer? Take a Lesson from Okinawan Centenarians - featuring John Beard - *Medium* 17 May

Paid parental leave progress has plateaued, according to a new paper – featuring Marian Baird, Myra Hamilton – *The National Tribune, Mirage News* 17 May

Inaction on paid parental leave slows economic progress for women, research finds - featuring Marian Baird and Myra Hamilton - *Smart Company* 17 May

Australia's current Paid Parental Leave scheme only entrenches negative gender stereotypes - featuring Marian Baird and Myra Hamilton - *Women's Agenda* 17 May

Ten years on, Paid Parental Leave is still mainly used by women in Australia - featuring Marian Baird and Myra Hamilton - *Kidspot* 18 May

Australia's Paid Parental Leave entrenches negative gender stereotypes – featuring Marian Baird, Myra Hamilton – *Kidspot.com.au* 18 May

Call for more fathers to take paid parental leave to counter entrenched gender inequality - featuring Marian Baird - *MyBusiness* 19 May

Annual wage growth stagnant, government warns against major minimum wage hikes – featuring Warwick McKibbin – *The Australian (Chinese edition)* 20 May

Budget changes make PLS more attractive to senior homeowners - featuring Hazel Bateman - *Firstlinks* 23 May

Virtual Summit Shorts: Using housing wealth to fund retirement income - featuring Hanewald Katja - *Actuaries Digitial* 24 May

New UNSW research on ageing to use Apple Watch and iPhone - featuring Kaarin Anstey and Brooke Brady - *News Today, What's On Australia, Australian Associated Press - PRNewswire, The National Tribune, Newswirenz-Pr_newswire, UNSW Newsroom, India Education Diary* 25 May

Budget changes make Pension Loans Scheme more attractive to senior homeowners - featuring Hazel Bateman - *SeniorAu* 27 May

Welcome to Firstlinks Edition 409 - featuring Hazel Bateman - *Firstlinks* 27 May

Sometimes, a great company should just sit in the bottom drawer - featuring Hazel Bateman - *Morningstar.com.au* 27 May

Especial Cambio21 ¿Pueden la dieta y el ejercicio reducir el riesgo de demencia? - featuring Kaarin Anstey - *Cambio 21,* 29 May

Budget makes home equity loan more attractive to seniors – featuring Hazel Bateman – *Firstlinks* 30 May

¿Pueden la dieta y el ejercicio reducir el riesgo de demencia? - featuring Kaarin Anstey - *Infobae, Centro De Informes, Noticias de Bariloche, Noticias24MX, Alianza Tex* 30 May

Can diet and exercise reduce the risk of dementia? - featuring Kaarin Anstey - *ARCHYDE* 30 May

Multidisciplinary research promises to reveal ways to prevent dementia - featuring Kaarin Anstey - *Sciencenet News China, CKCest CN, cas.cn, myzaker.com* 31 May

New Metadata Database on Ageing empowers population ageing researchers in Australia - featuring Jeromey Temple - *The National Tribune, Mirage News, What's On Australia, News Today, Mediaverse, Australian Associated Press, Medianet, Newswirenz* 31 May

First major Uni gathering since COVID to chart road ahead - featuring Warwick McKibbin - *Mirage News, The National Tribune* 2 June

Why menstrual leave is a hot-button workplace issue - featuring Marian Baird - *The University of Sydney Newsroom, Mirage News, The National Tribune* 2 June

Helfen Sport und gute Ernährung wirklich gegen Demenz? - featuring Kaarin Anstey - *Heise online* 3 June

China's population slowdown is a ticking time bomb Beijing can't disarm fast enough - featuring Peter McDonald - *Fortune* 3 June

Mental health impact on partners of FIFO workers - featuring Sharon Parker - *Mining People International* 8 June

Tapping into Australia's ageing workforce: insights from recent research - featuring Marian Baird, Rafal Chomik, Sharon Parker - *The National Tribune, Senior AU, News Today, What's On Australia, ConnectWeb - PR Newswire, Mirage News, Medianet, Business Franchise Australia and New Zealand* 10 June

Changing demographics could force Australia to rethink its workforce - featuring Rafal Chomik - *Nestegg.com.au* 11 June

*The intergenerational report was sobering, but the reality may be wors*e - featuring Rafal Chomik - *Barbados News.Net* 11 June

Older workers encouraged to join aged care sector as two out of five adults will be over 55 in 2050 - featuring Rafal Chomik, Sharon Parker - *Inside Ageing* 12 June

Old people are our future - featuring Sharon Parker - L*egal Practice Intelligence* 13 June

Parents put together childcare options to get the job done right – featuring Marian Baird - *Sydney News Today* 16 June

Mental health in the mining industry: expert research - featuring Sharon Parker - *Mining People International* 21 June

The truth about parental leave & how it can make you a better man - featuring Marian Baird - *The Father Hood* 21 June

Australia's ageing prisoners - featuring Natasha Ginnivan - *World Prison Brief* 21 June

Menstrual leave adopted by more Australian businesses as debate grows around policy - featuring Marian Baird - *ABC News, MSN Australia* 24 June

Science: Can diet and exercise reduce dementia risk? - featuring Kaarin Anstey - *medsci.cn* 25 June

Australia Is Emerging As A Global Leader In Offering Staff Menstrual Leave - featuring Marian Baird - *LaBible* 25 June

Over 55s critical to future workforce - featuring Rafal Chomik, Marian Baird, Sharon Parker - *Yahoo! New Zealand - News, Yahoo!7 Finance, Thisismoney.co.uk, Vietnam Explorer News, Channel 7 News, Australian Senior, 7NEWS. co.au, MSN Australia* 26 June

Reimagining Work After COVID - featuring Sharon Parker - *psychologicalscience.org* 28 June

A pandemic switch to flexible work drives a women's employment boom – featuring Marian Baird – *Sydney News Today* 28 June

Pandemic switch to flexible work drives jobs boom for women – featuring Marian Baird – *News Chant* 28 June

How 'super-agers' live to 100 with a healthy mind - featuring Kaarin Anstey - *Your Life Choices* 29 June

Intergenerational reports were calm, but the reality may be worse – featuring Rafal Chomik - *Illinois News Today* 29 June

The intergenerational report was sobering, but the reality may be worse - by Rafal Chomik - *The Conversation, The Times, Business Daily Media, Sydney Sun, Australian Daily Bulletin.com.au, UNSW Newsroom, Manila Metro News, Venezuela Star, Israel Herald, Nigeria Sun, Big News Network. com, India Gazette, Tajikistan News.Net, Beijing News, Hong Kong Herald, Mexico Star, ForeignAffairs.co.nz* 29 June

New Intergenerational Report indicates COVID-19 will have lasting impact on the economy - featuring Rafal Chomik - *Elite Agent Magazine* 29 June

Economy will be weak and in need of support after pandemic, say top economists in 2021-22 survey - featuring Warwick McKibbin - *The Times, Business Daily Media, PitchEngine.com.au, The Bulletin, The Conversation, ForeignAffairs.co.nz, The Australian Financial Review, Toys Matrix, The Middle East North Africa Financial Network, Vietnam Explorer News Channel, EconoTimes* 29 June

Reverse Mortgages Grow by 5 Times in Australia Since 2019 - featuring Katja Hanewald - *Reverse Mortgage Daily* 1 July

Intergenerational report on Australia – featuring John Piggott – *The Saturday Paper* 3 July

Tapping into Australia's ageing workforce - featuring Marian Baird, Sharon Parker - *First 5000* 5 July

Appointments, achievements – featuring Hazel Bateman, John Piggott - *Campus Morning Mail* 5 July

Retirees flock to reverse mortgage mortgages to harness home wealth – featuring Hazel Bateman – *Sydney News Today* 6 July

Researchers aim to improve self-management of early-stage dementia through innovative online platform – featuring Kaarin Anstey - *The National Tribune, Medianet, Mirage News, Aboutpain, ConnectWeb, News Today, What's On Australia* 12 July

COMMUNICATIONS, EDUCATION & COMMUNITY OUTREACH

New UNSW research on ageing to use Apple Watch and iPhone – featuring Kaarin Anstey, Brooke Brady – *SeniorAu* 14 July

This lockdown, women are once again doing more of the housework, home schooling - Featuring Marian Baird - *WA Today, Brisbane Times* 31 July

Top economists say cutting immigration is no way to boost wages – featuring Mike Keane – *NewsPronto.com, Businesses.com.au, Australian Daily Bulletin.com.au, The New Daily, International Travel News, Herald Globe, Sydney Sun, ForeignAffairs.co.nz, The Conversation, Business Daily Media, PitchEngine.com.au, The Bulletin, The Times* 4 August

It's time to normalise taking sick leave to manage painful periods - Featuring Marian Baird - *Junkee* 2 August

How a lack of new migrants in Australia will impact the 2021 Census figures – featuring Tom Wilson – *NewsFinale* 5 August

Australian expert: Fewer new immigrants will affect population census - featuring Tom Wilson – *Chinese Herald, 新国学网 网, 中国新闻网, 腾讯网, 搜狐新闻–搜狐, 云南网, 东方财富网, 今日墨尔本, 澳華網* 6 August

Why lockdown is crushing women's careers – featuring Marian Baird – *Primer* 7 August

Peak performance age in sport: typical Olympian is ageing – featuring Rafal Chomik - *The National Tribune, Mirage News, Medianet, Newswirenz, What's On Australia, News Today, ConnectWeb, News Centre newsblaze_au, Mediaverse, Australian Associated Press* 9 August

Study provides insights into the peak performance age in sport – featuring Rafal Chomik - *Australasian Leisure Management* 9 August

Top economists say cutting immigration is no way to boost wages – featuring Mike Keane – *Psnews* 9 August

Olympians are ageing and winning – featuring Rafal Chomik - *7NEWS.com.au, Racing and Sports, Thisismoney.co.uk, Daily Mail UK* 15 August

The best way to prevent dementia? Switch to one of these 'stimulating' jobs – featuring Sharon Parker – *The Ladders* 15 August

Golden oldies - Australia's Olympics are getting better with age, study shows – featuring Rafal Chomik - *In Queensland* 16 August

Letter from Australia: Too good to be true? – featuring Rafal Chomik - *Investment & Pensions Europe* 1 September

Meeting the needs of older citizens – featuring John Beard – *Guyana Times* 4 September

Reality may be worse than the Intergenerational Report expects – featuring Rafal Chomik – *Firstlinks* 8 September

NHMRC funding supports end of life planning – Featuring Craig Sinclair - *UNSW Newsroom* 15 September

How far will global population rise? Researchers can't agree – featuring Tom Wilson – *The India Nation* 22 September

La Cina ha limitato fortemente gli aborti per scopi non medici – featuring Peter McDonald – *Yahoo!, Elle Italia* 1 October

Well-being during downsizing – featuring Sharon Parker – *NEWS KINGPIN, TopNews Philippines, The Manila Times Online* 4 October

T*he first economic modelling of coronavirus scenarios is grim for Australia, the world* – featuring Warwick McKibbin - *Business Daily Media* 20 October

At the heart of the broken model for funding aged care is broken trust. Here's how to fix it – featuring Rafal Chomik - *Business Daily Media* 21 October

The intergenerational report was sobering, but the reality may be worse - featuring Rafal Chomik - *Business Daily Media* 21 October

Top economists back boosts to JobSeeker and social housing over tax cuts in pre-budget poll – featuring Warwick McKibbin - *Business Daily Media* 21 October

We're delaying major life events, and our retirement income system hasn't caught up - featuring Rafal Chomik - *Business Daily Media* 21 October

Expert: Standardizing the development of the third pillar pension insurance urgently needs a new top-level design – featuring John Piggott - *证券时报网, 东方财富网, cjz.vip, 搜狐公众平台, 猎金, 同花顺财经 , 财经网, 中国保险报, 金融时报, 猎金, 同花顺财经, 证券时报网, 东方财富网, 搜狐公众平台 ,洱海新闻网, 中国产业经济信息* 22 October

Pension accumulation is a 'protracted battle' 2021 Financial Street Forum Annual Meeting Hotly Discusses the Third Pillar Pension Insurance – featuring John Piggott - *新浪看点, 股票 – 中国金融信息网* – 22 October

How the pension and super could leave you behind - featuring Rafal Chomik - *Business Daily Media* 22 October

Timing the share market is hard – just ask your super fund - featuring CEPAR - *Business Daily Media* 24 October

Taxes, rabbits, and blank pages – no costed plan to net zero yet – featuring Warwick McKibbin – *Head Topics* 26 October

How Do We Promote Healthy Aging in Asia? This Is What the Experts Say – featuring John Piggott – *Asian Development Blog* 17 October

New research shows how hard it is for 'flying grannies' to care for their Australian grandkids - featuring Myra Hamilton - *The Conversation, Yahoo! News, The Bulletin, ForeignAffairs. co.nz, Australian Daily Bulletin.com.au, SeniorAu* 27 October

Why cutting Australia's migrant intake would do more harm than good, at least for the next decade – featuring Peter McDonald – *Business Daily Media* 27 October

Appointments, achievements – featuring Kaarin Anstey – *Campus Morning Mail* 27 October

How do we promote healthy aging in Asia? This is what the experts say – featuring John Piggott – *ForeignAffairs.co.nz* 27 October

Retiring at 70 was an idea well ahead of its time – featuring Rafal Chomik – *Business Daily Media* 28 October

Opinion 'Flying grannies' struggle to care for their Australian grandkids – featuring Myra Hamilton - *UNSW Newsroom* 29 October

On the hardships of migrant grandparents in Australia – featuring Myra Hamilton – *Indian Link* 29 October

Three UNSW researchers elected to Academy of Health and Medical Sciences – featuring Kaarin Anstey – *India Education Diary, Targeted News Service* 1 November

Appointments, achievements – featuring Marian Baird - *Campus Morning Mail* 1 November

Why older women without children face financial challenges – featuring Myra Hamilton – *INTHEBLACK* 1 November

Exceptional staff awarded Curtin's highest academic honour – featuring Sharon Parker – *Curtin University Australia* 1 November

Around the block: learning-driven approach to mortality modelling – featuring Michael Sherris - *The Actuary* 3 November

Pricing insurance policies with offsetting relationship - featuring Michael Sherris – *Cambridge Core* 4 November

Appointments, achievements – featuring Marian Baird and Sharon Parker - *Campus Morning Mail* 5 November

Big Melbourne is back, do you still want it? – featuring Peter McDonald – *Sydney News Today* 7 November

Big Melbourne is coming back, but do we still want it? - featuring Peter McDonald – *MSN – Australia, PressForm Germany* 7 November

'I was consumed with keeping her alive.' Why we need to talk about Teen-ternity leave - Featuring Marian Baird - *MamaMia* 9 November

Top economists say cutting immigration is no way to boost wages – featuring Mike Keane – *Business Daily Media* 10 November

The personal health data revolution will be televised – featuring Brooke Brady – *Wild Health Summits, The Medical Republic* 18 November

Appointments, achievements – featuring Tim Neal – *Campus Morning Mail* 19 November

Australia is one of the world's best places to retire, or is it? – featuring Rafal Chomik – *Business Daily Media* 21 November

CFP Board Center for Financial Planning Announces Best Paper Winners for 2021 Academic Research Colloquium – featuring Hazel Bateman - *Rewind 1019 – WKSK-FM, The Podcast Park [Newswire], 1045 The Dan.com, Morningstar PR Newswire, WAVE-TV, KNOE-TV, KEYC-TV, KEVN-TV, Orange Leader, WWBT-TV, WAGM-TV, KGNS-TV, Americus Times-Recorder, KFVS-TV, WAFB-TV, TheStreet, American Press, Port Arthur News, WTAP, KPLC-TV, KSWO-TV, Alaska's News Source, KYTV-TV, JOT / UP, WRDW-TV, WFLX-TV, KCBD-TV, KXII-TV, WXIX-TV, WTVG-TV, The Jessamine Journal, WVUE-TV, WCAX-TV, KAIT-TV, KZBZ-TV, WECT-TV, KJCT-TV, KLTV-TV, KALB-TV, KCRG-TV, WVLT-TV, Hawaii News Now, KWQC-TV, WOIO-TV, Idaho State Journal, Longview News-Journal, PR Newswire, Yahoo! Finance, Finanzen.net, MarketWatch, Dakota News Now, Benzinga, Markets Insider- Business Insider, KTVN-TV, WBOC-TV, KJUN-CA, SNNTV.com, Spoke, US983 – Lifestyle, Insider Tracking, KSNB-TV, Le Lezard (EN), KSLA-TV, WMBF-TV, Ticker Technologies, Canadian Insider, Business Class News, Business Class News, The Luxury-Chronicle – PRNewswire, 967 The Wolf – Lifestyle, WCSC-TV, Latin Trade Magazine, WHLF-FM – Lifestyle, KMLK – Lifestyle, Country Legends 1059 – Lifestyle, Djournal.com, kyoutv, Kolt Country – Lifestyle* 23 November

CFP Board Picks Best Research Papers of 2021 – featuring Hazel Bateman - *ThinkAdvisor* 24 November

UNSW economist receives prestigious Paul Bourke Award for early career research – featuring Tim Neal – *UNSW Newsroom* 24 November

Balancing work and fertility demands is not easy – but reproductive leave can help – featuring Marian Baird – *Yahoo News Australia, The Bulletin, ForeignAffairs.co.nz, Toys Matrix, The Middle East North Africa Financial Network, The Conversation Canada, Devdiscourse, The Week, EastMojo, Devdiscourse, ETV Bharat, The Economic Times, Namibia Press Agency, Australian Daily Bulletin.com.au, Micky* 25 November

CFP Board Announces Best Paper Winners For 2021 Academic Research Colloquium - featuring Hazel Bateman – *Life & Health Advisor* 26 November

We're delaying major life events, and our retirement income system hasn't caught up – featuring Rafal Chomik - *Business Daily Media* 28 November

Alzheimer's Disease - Urgent system reform called for as Alzheimer's disease expected to impact more than one million Australians – featuring Kaarin Anstey - *News Today, What's On Australia, ConnectWeb, Australian Associated Press, News for Business, News Centre, Newswirenz, newsblaze_au, Medianet, Aboutpain* 29 November

Engaging apathetic super consumers is a tough task – featuring Hazel Bateman – *Investment Magazine* 1 December

Executive Director, Superannuation Division, Suzanne Smith - notes to the 29th Annual Colloquium of Pensions and Retirement Research – featuring CEPAR Colloquium - *Market Screener* 2 December

Retirement income products should not need advice: panel – featuring CEPAR Colloquium – *Money Management* 2 December

Top economists back boosts to JobSeeker and social housing over tax cuts – featuring Warwick McKibbin - *The Middle East North Africa Financial Network* 17 December

END USER LINKS

PRESENTATIONS/BRIEFINGS

PUBLIC

1   Anstey, K. (April 2021). Keynote. Lifestyle Contributions to Brain Health – An Overview. University of British Columbia, Virtual Brain Health Symposium. Vancouver, Canada. Online.

2   Baird, M. (November 2021). Constructing a New Gender Contract for Australia. TJ Ryan Foundation and QUT Centre for Decent Work. Australia. Online.

3   Baird, M. (November 2021). To Produce or Reproduce: Is that the Question for Australian Women? Academy of the Social Sciences 50th Anniversary Symposium. Australia. Online.

4   Baird, M. (March 2021). Fact and Fiction: Women and Work in Australia. Core Community Group. Australia.

5   Bateman, H. (March 2021). Implications of the Retirement Income Review Report, organised by the Academy of the Social Sciences in Australia, the Tax and Transfer Policy Institute, and the Social Policy Institute. Experts at the 2021 Roundtable: Completing Australia's Retirement Income System. Canberra, Australia.

6   Bateman, H. (February 2021). Panel Member. Consumption. COTA Australia National Policy Forum 2021: Retirement Incomes. Canberra, Australia.

7   Byles, J. (2021). Acceptable Ageing - Expectations, Adapting, Engaging and Overcoming Ageism. Newcastle U3A. Online.

8   Byles, J. (2021). The Natural History of Ageing. Hunter Region Botanic Gardens. Newcastle, Australia.

9   Deng, Y. (September 2021). Delay the Pension Age or Adjust the Pension Benefit? Implications for Labor Supply and Individual Welfare in People's Republic of China. ADB, ADBI and JICA Otago RI Conference on Health and Socioeconomic Well-Being of Older Persons in Developing Asia: Role of Individual and Household Data. Tokyo and Manila. Online.

10   Hamilton, M. (October 2021). Gender Equality and Paid Parental Leave in Australia. Journal of Industrial Relations. Australia. Online.

11   Hamilton, M. (October 2021). Mature Workers and Care. Carers NSW. Australia. Online.

12   Hamilton, M. (October 2021). New Directions in Centre-based Aged Care in Australia: Responding to Changing Funding Models and the COVID-19 Pandemic. Australian Social Policy Conference. Australia. Online.

13   Hamilton, M. (May 2021). Security for Older Single Women without Children. COTA NSW and the Older Women's Network. Sydney, Australia.

14   Hamilton, M. (October 2021). Towards Shared Parental Leave. Diversity Council Australia. Australia. Online.

15   Hanewald, K. (January 2021). Delay the Pension Age or Reduce the Pension Benefit? Implications for Labor Supply and Individual Welfare. Netspar International Pension Workshop. Australia.

16   Hanewald, K. (2021). Intrinsic Capacity: Validation of a New WHO Concept for Health Ageing in a Longitudinal Chinese Study. Global Network for Ageing Research on China (GNARC), Reading Group, November 2021, Online; Centre for Healthy Brain Ageing (CHeBA) Seminar Series, UNSW Sydney, September 2021, Online and 11th APRU Population Aging Virtual Conference, April 2021, Indonesia, Online.

17   Hanewald, K. (2021). Multi-population Mortality Modeling with Economic Trends: A Hybrid Neural Network Approach. 24th International Congress on Insurance: Mathematics and Economics (IME 2021), July 2021, Online; Annual Meeting of the Asia-Pacific Risk and Insurance Association (APRIA) July 2021, Online and International Actuarial Organisation (IAA), Online Joint Section Colloquium, October 2021, Online.

18   Hanewald, K. (August 2021). Multi-state Health Transition Modeling using Neural Networks. Annual Meeting of the American Risk and Insurance Association (ARIA). Online.

19   Ho, T. (January 2021). Long-term Care Insurance Financing using Home Equity Release: Evidence from an Experimental Study. Netspar International Pension Workshop. Online.

20   Parker, S.K. (May 2021). Panellist. Business News Aged Care Sector Briefing, Perth Convention and Exhibition Centre. Perth. Australia.

21   Parker, S.K. (July 2021). Managing and Preventing Burnout in the Workplace. Comcare Mental Health Community of Practice. Australia. Online.

22   Parker, S.K. (June 2021). Smart Work Design: Now and into the Future. WorkSafe QLD Musculoskeletal Disorders Symposium. Australia. Online.

23   Parker, S.K. (May 2021). Panel. Sector Briefing: The Future of Aged Care. Breakfast by Business News. Perth Convention Center. Perth, Australia.

24   Piggott, J. (September 2021). Demographics, Labor Force and Older People in Indonesia. ADB, ADBI and JICA Otago RI, Conference on Health and Socioeconomic Well-being of Older Persons in Developing Asia: Role of Individual and Household Data. Tokyo and Manila. Online.

25   Piggott, B. (March 2021). Implications of the Retirement Income Review Report, organized by the Academy of the Social Sciences in Australia, the Tax and Transfer Policy Institute, and the Social Policy Institute. Experts at the 2021 Roundtable: Completing Australia's Retirement Income System. Canberra, Australia.

26   Stanaway, F. (2021). Convenor. AAG CALD Interest Group Workshop 2021. Online.

27   Yiengprugsawan, V. (April 2021). Depressive Symptoms among Caregivers for Older Person: Implications for Long-term Care in Asia. The Association of Pacific Rim Universities (APRU) 11th Population Aging Conference. Jakarta, Indonesia. Online.

28   Yiengprugsawan, V. (October 2021). Health System Responsiveness for Emerging Cardiovascular Events among the Elderly in Developing Countries. International Conference on Cardiovascular Disease. Yogyakarta, Indonesia. Online.

29   Yiengprugsawan, V. (September 2021). Universal Health Coverage and Older Persons in Mongolia: An Investigation of Rural-Urban Disparities in Health Service Use. ADB, ADBI and JICA Otago RI Conference on Health and Socioeconomic Well-Being of Older Persons in Developing Asia: Role of Individual and Household Data. Tokyo and Manila. Online.

GOVERNMENT[6]

1   Andrei, D. and Chong, J. (June 2021). COVID-19 and Mature Workers. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia.

2   Anstey, K. (November 2021). Meeting with the ACT Health Epidemiology and Mental Health Branches. Canberra, Australia.

3   Anstey, K. (2021). Cognitive Ageing and its Impact on Decision-making. Webinar for invited group of CEPAR Stakeholders including Commonwealth and State government departments/agencies. Online.

4   Ansety, K. (2021). Member. Australian Institute of Health and Ageing. Australia.

5   Anstey, K. (May 2021). The Global Council on Brain Health. American Association of Retired Persons.

6   Anstey, K. (April 2021). Why we need Public Health Approaches to Risk Reduction. Launch of the mDementia Toolkit. World Health Organisation.

7   Baird, M. (June 2021). Policy Contexts for a Changing World: The Regulatory Context in Australia and Innovations at the Workplace Level. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia. Online.

8   Baird, M. and Williams, A. (July 2021). Mature Age Employment Sensemaking Session. Commonwealth Department of Education, Skills and Employment. Online.

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[6]   Includes memberships of government committees and groups.

9   Baird, M. (August 2021). Presentation. Women and the Australian Labour Market – Opportunities for Change. Victorian Government's Inquiry into Economic Equity for Victorian Women. Online.

10   Bateman, H. (February 2021). Presentation. Retirement Income Review Report. COTA National Policy Forum. Canberra, Australia.

11   Bateman, H. (March 2021). Meeting with ASIC to discuss Potential Changes to the Regulations around Retirement Income Projections and Retirement Calculators. Australia.

12   Bateman, H. (April 2021). Meeting with Matt Flavel to discuss the Impact of Potential Changes to the Pension Loans Scheme. Deputy Secretary, Department of Social Services. Australia.

13   Bateman, H. (September 2021). Meeting with New Zealand (NZ) Retirement Commission to Discuss the NZ Retirement Income System. Online.

14   Bateman, H. (September 2021). Flexible Insurance for Informal Long-Term Care: A Study of Stated Demand. Financing and Sustainability of Future Proofing Aged Care. Ageing Futures Institute and CEPAR webinar. Sydney. Online.

15   Byles, J. (December 2021). Healthy Ageing and Longevity to 100 years. 2021 Australian Longitudinal Study on Women's Health Symposium. Australian Government Department of Health. Online.

16   Byles, J. (October 2021). National Ageing Research Institute. National Aged Care Research Roundtable. Online.

17   Byles, J. (2021). Participant. Australian Institute of Health and Welfare, Aged Care Data Advisory Group. Australian Government. Online.

18   Chomik, R. (June 2021). Presentation. Workforce Demographics: Shifts in Mature Workforce Participation and Employment. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia. Online.

19   Hamilton, M. (June 2021). Bringing the Macro/policy and Micro/practice Together'. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia. Online.

20   Kudrna, G. (2021). Member. Steering Group for Treasury's OLGA model. The Commonwealth Treasury.

21   McDonald, P. (July 2021). Employment of Temporary Migrants in Australia. Department of the Treasury. Canberra, Australia.

22   McDonald, P. (October 2021). Discussion of Australia's Future Fertility Rates with the Centre for Population. Treasury.

23   McDonald, P. (October 2021). Australian Fertility Trends. Centre for Population, Department of the Treasury. Canberra, Australia.

24   McDonald, P. (July 2021). Employment of Temporary Entrants to Australia. Centre for Population, Department of the Treasury. Canberra, Australia.

25   McDonald, P. (November 2021). Immigration Post-COVID. Shadow Minister for Immigration. Melbourne, Australia. Online.

26   McDonald, P. (November 2021). Meetings of the 2021 Census Independent Quality Assurance Panel. Census Independent Quality Assurance Panel.

27   McDonald, P. (July 2021). Participation in Expert Population Advisory Group. NSW Department of Planning and Environment. Australia.

28   McDonald, P. (November 2021). Roundtable Discussion on the 2022-23 Migration Program. Department of Home Affairs. Canberra, Australia.

29   McDonald, P. (April 2021). Member. ABS 2021 Census Quality Assurance Panel. Australian Bureau of Statistics. Canberra, Australia.

30   McDonald, P. (March 2021). Meeting. Methodology of the 2021 Census Post-Enumeration Survey. Australian Bureau of Statistics. Canberra, Australia.

31   McDonald, P. (May 2021). Presentation. The Impact of the COVID-19 Pandemic on Fertility. United Nations Meeting. Australia.

32   McDonald, P. (November 2021). Presentation. Prospects for International Migration to Australia and New South Wales. NSW Expert Population Advisory Group. Sydney, Australia. Online.

33   McKibbin, W. (October 2021). Climate Policies and Monetary Policies in the Euro Area. ECB Forum on Central Banking 2021: Part 6. Online.

34   McKibbin, W. (May 2021). Global Economic Impacts of Climate Shocks, Climate Policy and Changes in Climate Risk Assessment. Webinar. Australian Treasury. Online.

35   McKibbin, W. (2021). Meeting with Australian Treasury to discuss the Inputs of the Environment Chapter of the 2021 Intergenerational Report. Australian Treasury. Government.

36   McKibbin, W. (December 2021). Is there a Global Consensus in Stimulating a New Growth Path? 10th Annual International Forum on Economic Development and Public Policy. Ministry of Finance, Republic of Indonesia. Online.

37   O'Keefe, P. (October 2021). Presentation. International Consultation Workshop on Vietnam Social Security Agency Development Strategy toward 2030. Vietnam Social Security Agency. Hanoi, Vietnam. Online.

38   Parker, S.K. (June 2021). Presentation. A Healthy and High Performing Mature Workforce: Inclusion, Individualisation and Integration Strategies in Australian Workplaces. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia.

39   Piggott, J. (February 2021). Panel Member of Panel 3 (Government Contributions). COTA Australia National Policy Forum 2021: Retirement Incomes. Canberra, Australia.

40   Piggott, J. (February 2021). Panellist. Government Contributions Pensions Panel Discussion, Tax Concessions and Personal Responsibility: Rebalancing who pays what for retirement. COTA Australia. Canberra, Australia.

41   Piggott, J. (February 2021). Meeting between CEPAR and NSW Treasury Department to discuss the Intergenerational Report and mortality. CI's John Piggott and Peter McDonald with NSW Treasury personnel, Luke Maguire and Riley Kelly. NSW Treasury Department. Sydney, Australia.

42   Sherris, M. (September 2021). Sustainable Aged Care Financing in Australia. Financing and Sustainability of Future Proofing Aged Care. Ageing Futures Institute and CEPAR webinar. Sydney. Online.

43   Temple, J. (March 2021). Meeting to provide advice on the Measurement of Food Insecurity in Australian Microdata. Australian Bureau of Statistics. Australia.

44   Temple, J. (May 2021). Member. Aged Care Data Advisory Group. Australian Institute of Health and Welfare. Australia.

45   Temple, J. (May 2021). New Instrument to Measure Food Insecurity among Older Australians. Australian Bureau of Statistics. Australia.

46   Truxillo, D. (June 2021). Workplace Interventions to Support an Ageing Workforce: International Lessons and Evidence. CEPAR Policy Dialogue on Mature Workers in Organisations. Canberra, Australia.

47   Whiteford, P. (March 2021). Presentation. Findings and Implications of the Retirement Income Review Report. The Academy of the Social Sciences in Australia, the Tax and Transfers Policy Institute and the Social Policy Institute. Canberra, Australia.

48   Wilson, T. (Nov 2021). Presentation. Future Mortality Rates for NSW. NSW Expert Population Advisory Group. Sydney, Australia. Online.

49   Wilson, T. (May 2021). Presentation. Projections of the Future Birthplace Composition of Australia's Population. Centre for Population, Department of the Treasury. Australia.

50   Zoszak, L. (August 2021). Meeting to discuss a Survey Rollout and other Data Sources. City of South Perth. Perth, Australia.

END USER LINKS

INDUSTRY/BUSINESS/END USERS

1   Andrei, D. (May 2021). Engagement and Literature Review Project. Western Australia Police. Perth, Australia.

2   Andrei, D. (May/August 2021). Exploring Collaboration Opportunity. Viridian Advisory. Melbourne, Australia.

3   Andrei, D. (May 2021). Exploring Collaboration Opportunity with Chief Medical Officer. Rio Tinto. Perth, Australia.

4   Anstey, K. (2021). WHO Dementia Research Blueprint, Dementia Prevention Working Group.

5   Anstey, K. (November 2021). Meeting. The Dementia Australia Research Foundation.

6   Anstey, K. (October 2021). Panellist. Sax Institute Webinar for ECRs on using Longitudinal Data. Online.

7   Anstey, K. (October 2021). The Imposter Syndrome. Women in Research. Webinar Series. Webinar #10. Online.

8   Baird, M. (July 2021). Paid Parental Leave in Australia. Industrial Relations Society of NSW Webinar. Sydney, Australia. Online.

9   Baird, M. (March 2021). Creating a Culture of Respect and Equality. AHRI's International Women's Day 2021. Australia. Online.

10 Baird, M. (June 2021). Working Arrangements and COVID-19: Employee Preferences and Employer Responses in Australia. Online.

11 Baird, M. (March 2021). Women and Work in Australia: Past, Present and Future. Moray and Agnew. Australia.

12 Bateman, H. (April 2021). Meeting with Anand Thomas to discuss the Impact of choice of Fund and Proposed Stapling Legislation on UniSuper. UniSuper Chief Strategy and Marketing Officer. Australia. Online.

13 Bateman, H. (May 2021). Meeting with Robbie Campo to discuss the Challenges for the Superannuation Industry. Cbus Group. Melbourne, Australia. Online.

14 Bateman, H. (November 2021). Super Fund Member Experience in the Context of the Retirement Income Covenant. TAL 'Innovations' Team. Melbourne, Australia. Online.

15 Bateman, H. (November 2021). Meeting with Shannon Nutter: Principal, Head of Proposition and Customer Experience, to Discuss Current and Future Superannuation Issues. Vanguard Super. Melbourne, Australia. Online.

16 Bateman, H. (October 2021). Meeting to Discuss Strategies to Address 'Under Insurance'. Insurance Council of Australia (ICA). Sydney, Australia.

17 Bateman, H. (October 2021). Update on home equity release research. Third Pillar Forum, Household Capital Pty Ltd. Melbourne, Australia. Melbourne.

18 Beard, J. (2021). Commissioner. National Academy of Medicine USA, Global Healthy Longevity Commission. USA.

19 Byles, J. (June 2021). Asia-Oceania Symposium: From Covid-19 to a Decade of Healthy Ageing. International Association of Gerontology (IAGG) Pre-Congress eConference. Online.

20 Byles, J. (October 2021). Build Back Better World for Older Women: Good Practices to Ensure Health and Income Security in the Post Pandemic Era. HelpAge India in Association with Development Welfare Research Foundation. Online.

21 Byles, J. (March 2021). Roundtable. Delivering Prevention in an Ageing World: Inspire and Engage. ILC-UK Webinar. Online.

22 Byles, J. (November 2021). Human Rights Council Resolution 48 on the Rights of Older Persons. EveryAGE Counts Coalition Steering Committee Meeting. Online.

23 Byles, J. (2021). Multi-country Cross-sectional and Longitudinal Studies to Quantify Unmet needs for Health and Social Care among Older People. WHO Kobe Centre. Online.

24 Byles, J. (October 2021). Old Age. WHO ICD-11 'Old Age' discussion document writing group. Online.

25 Byles, J. (March/April 2021). Participated. 11th Session of the United Nations (UN) Open-Ended Working Group (OEWG) on Ageing. UN General Assembly. Online.

26 Byles, J. (October 2021). The Future of Retirement in the Hunter. Thirdi Group. Sydney, Australia. Online.

27 Byles, J. (March 2021). The Impact of COVID-19 on the Human Rights of Older Persons: An International Dialogue. Online.

28 Byles, J. (June 2021). Why Gender Matters – Exploring the Impact of Gender on Health and Wellbeing in an Ageing World. ILC-Global Alliance Webinar. Online.

29 Byles, J. (April 2021). Member. International Longevity Centre – Global Alliance: International Committee, Gender and Ageing Committee, COVID-19 Report Writing Group, LTC Research Group, Positive Aspects of Caregiving Research Group. Online.

30 Deng, Y. (April 2021). Recovery from Mobility Limitations among Older Americans. APRU Population Aging Conference 2021. Online.

31 Ginnivan, N. (November 2021). Meeting with SBS to discuss Ageism Advisory.

32 Ginnivan, N. (November 2021). Panellist. AAG 2021 Combating Ageism Session.

33 Hamilton, M. (May 2021). Financial Security for Single Older Women Without Children. Sydney Council on the Ageing (COTA) NSW Webinar. Australia. Online.

34 Hanewald, K. (May 2021). China's Pension Funds Face Risking Risks. Broadcast Retirement Network.

35 Hanewald, K. (September 2021). From the Frontier of Population Ageing Research. The Data Analytics Show. Online.

36 Hanewald, K. (May 2021). Multi-State Health Transition Modeling Using Neural Networks'. 2021 All-Actuaries Virtual Summit. Online.

37 Hanewald, K. (May 2021). The role of Housing Wealth for Retirement Planning. Actuaries Summit. Online.

38 Iles, L. (April 2021). Generational Diversity at GHD. GHD: Participant feedback summary. Perth, Australia.

39 Kabuche, D. (2021). Longevity Risk: Retirement Product Innovation and Risk Management Strategies, 3MT Thesis Competition. July to September 2021, Online.

40 Khalatbari-Soltani, S. (May 2021). Socioeconomic Position and Healthy Ageing: A Systematic Review of Cross-sectional and Longitudinal Studies. CEPAR Pensions, Retirement and Ageing Seminar. Invited Speaker.

41 McDonald, P. (September 2021). 2021 Intergenerational Report. Academy of Social Sciences Colloquium. Online.

42 McDonald, P. (October 2021). Meeting to discuss the Institute's Research Agenda. Scanlon Foundation Research Institute Committee.

43 McDonald, P. (November 2021). Meeting attendance & presentation. NSW Expert Population Advisory Group.

44 McDonald, P. (November 2021). Meeting with Shadow Minister for Immigration. Andrew Giles. Canberra, Australia.

45 McKibbin, W. (October 2021). Where to next for the Reserve Bank. Grattan Institute. Online.

46 Mitchell, O.S. (March 2021). Debt in an Aging Environment. European Banking Federation. Brussels, Belgium. Online.

47 Mitchell, O.S. (September 2021). Desafíos que enfrentan los Sistmas de Pensiones Globales. Chile CFP Society.

48 Mitchell, O.S. (September 2021). Future Proofing Pensions. Fireside Chat with Keith Ambacthsheer for the Brazilian Pension Fund Association. Online.

49 Mitchell, O.S. (March 2021). Retirement Advice in the Post-COVID Era. Investment and Wealth Institute. Online.

50 Mitchell, O.S. (July 2021). The Retirement Income Ecosystem: A 360-degree View. For Pensions and Investments Webinars. Online.

51 Parker, S.K (July 2021). Business News Panel. Disrupted Festival of Ideas with the State Library of Western Australia. Australia.

52 Parker, S.K. (May 2021). Working from Home – A Look to the Future. Australasian College of Health Service Management WA Leadership Conference. Perth, Australia.

53 Parker, S.K (May 2021). Keynote. Work Design and Individual Influences on Employee Experiences During The Pandemic. EAWOP (European Association for Work & Organisational Psychology) Virtual Series. Online.

54 Parker, S.K. (November 2021). Improving Worker Experiences When Working From Home: Lessons from Work Design. EAWOP (European Association for Work & Organisational Psychology) Worklab. Online

55 Parker, S.K. (June 2021). The Imposter Syndrome. Women in Research. Webinar Series. Webinar #10. Online.

56 Piggott, J. (June 2021). Aging Societies in the Western Hemisphere. CSIS Roundtable Invitation: Aging Societies in the Western Hemisphere. Centre for Strategic and International Studies (CSIS), Americas program. Washington, DC. (Virtual), USA.

57 Piggott, J. (June 2021). Private Sector Conversation on the UN Decade of Healthy Ageing. World Economic Forum's Global Future Council on Healthy Ageing and Longevity. Online, Switzerland.

58 Piggott, J. (July 2021). Strategy Session on The Future of the Caregiving Workforce in the Asia-Pacific. Global Coalition on Aging. New York, USA. Online.

59 Piggott, J. (2021). Commissioner. National Academy of Medicine USA, Global Healthy Longevity Commission. USA.

60 Piggott, J. (July 2021). Discussion related to the Retirement Income Covenant Position Paper. COTA Consumer Focused Retirement Income Roundtable Meeting. Online.

61 Sherris, M. (May 2021). Taxation and Policyholder Behavior: The Case of Guaranteed Minimum Accumulation Benefits. UNSW School of Risk and Actuarial Studies. Sydney, Australia.

62 Truxillo, D. (May 2021). More than just a Control Variable: Age in the Workplace and Lingering Measurement Issues. European Association of Psychological Assessment (EAPA). Online.

63 Wilson, T. (November 2021). Future Mortality Rates for NSW. NSW Expert Population Advisory Group Meeting. Online.

64 Williams, A. (July 2021). Report: Review of Policies and Practices For Mature Workers for Medium Sized Law Firm. Name Witheld.

65 Zoszak, L. (May 2021). Design and Implementation of Survey, Project Planning. City of Joondalup. Joondalup, Australia.

66 Zoszak, L. (June 2021). Mature Workers in Organisations: Intervention Development. Presentation to the Executive Committee. City of Stirling. Stirling, Australia.

67 Zoszak, L. (July 2021). The CEPAR Project: Overview, Outcomes, and Timelines. Presentation to Health Support Services. Perth, Australia.

68 Zoszak, L. & Iles, L. (March 2021). Mature Workers in Organisations. LGIS: Safety and Health Representative Conference. Perth, Australia.

69 Zoszak, L., Chong, J.X.Y., & Zellman, L. (April 2021). Summary of Survey Results and Intervention Workshop with City of Stirling Executives. City of Stirling: Stirling, Australia.

CENTRE FINANCE

CONSOLIDATED FINANCIAL STATEMENT 2017–2020

INCOME		2017($)	2018($)	2019($)	2020($)	2021($)
ARC Centre Grant distributed as follows:						
University of New South Wales		2,579,024	2,820,862	2,238,139	2,672,888	2,643,926
Australian National University		-	461,452	295,734	306,240	311,801
University of Sydney		255,732	792,658	703,982	375,339	352,932
University of Melbourne		420,305	509,529	432,930	436,534	487,010
University of Western Australia		246,688	-	-173,105	-	-
Curtin University		-	-	963,965	376,908	392,867
University of New South Wales		548,551	719,196	633,874	633,874	633,874
Australian National University		-	138,396	70,375	70,375	70,375
University of Sydney		83,839	114,522	147,239	126,987	106,728
University of Melbourne		73,980	145,975	100,797	100,952	152,946
University of Western Australia		54,260	-50,677	-	-	-
Curtin University		-	-	286,562	96,547	86,642
NSW Department of Industry (Research Attraction and Acceleration Program)	NOTE 1	66,000	153,915	165,834	156,919	163,715
Department of Foreign Affairs and Trade		30,000	-	-	-	-
Department of Health	NOTE 2	50,000	50,000	50,000	50,000	-
Department of Social Services		50,000	50,000	50,000	50,000	50,000
Medibank		50,000	50,000	50,000	-	-
National Wealth Management Services Limited		50,000	50,000	50,000	50,000	50,000
NSW Treasury		50,000	50,000	50,000	50,000	50,000
PwC		40,000	40,000	40,000	40,000	40,000
Reserve Bank of Australia		50,000	50,000	50,000	50,000	50,000
Willis Towers Watson		65,000	65,000	65,000	65,000	65,000
Commonwealth Treasury		-	50,000	50,000	50,000	50,000
UNSW Contestable Funds / Strategic Funds / UNSW Business School Funds		-	379,153	521,927	211,271	248,747
Superannuation Colloquium Registration Fees		-	21,650	34,876	5,426	-
Long-term Care Directors Conference Registration Fees		-	12,038	-	-	-
Economics of Ageing Workshop Sponsorship		-	-	13,394	-	-
ERA Conference Registration Fees		-	-	7,817	-	-
International Network for Pensions, Aging and Retirement Research Conference Sponsorship		-	33,902	54,290	-	-
Total Income		4,763,379	6,707,571	6,953,630	5,975,260	6,006,564

EXPENDITURE	2017($)	2018($)	2019($)	2020($)	2021($)
Salaries	61,325	3,239,416	5,142,693	5,385,044	5,224,461
Scholarships	-	158,812	210,442	226,629	217,176
Travel	2,872	336,156	519,799	52,917	7,249
Emerging Researchers in Ageing initiative: annual contribution	-	80,000	70,000	80,000	80,000
Events	335	124,216	120,642	33,499	16,955
Other research related expenses	581	45,035	179,712	218,410	102,611
Recruitment and relocation expenses	3,034	22,753	27,597	3,459	2,190
Centre administration, consumables and I.T. maintenance	145	27,837	63,321	44,009	11,306
Equipment	-	19,855	49,398	14,232	25,636
Website, branding and marketing	4,978	50,190	59,317	26,815	68,557
Total Expenditure	73,270	4,104,270	6,442,922	6,085,014	5,756,139
Opening balance at the beginning of the year		4,690,109	7,293,409	7,804,117	7,694,363
Closing balance as at year end	4,690,109	7,293,409	7,804,117	7,694,363	7,944,788

NOTE 1: A total of $1,000,000 was received in 2017, covering the period 2017-2023. $164K is reported for 2021 and includes annual interest payments of $715.

NOTE 2: A payment of $50,000 from Dept of Health was received after the 2021 financial cut-off and therefore will be reported in 2022.

ESTIMATES OF FUTURE INCOME AND EXPENDITURE

INCOME

The Centre's main source of funds in 2022 will be the Australian Research Council (ARC). The administering and collaborating organisations, as well as the partner organisations will make contributions at their contracted rates. The UNSW Business School will provide in 2022 an additional $237K to support the hiring of research personnel associated with new research on developing policy and business responses to Asia's ageing demographic. In total, we estimate 2022 Centre income to be around $5.88 million.

EXPENDITURE

In 2022 the Centre plans to fund a range of initiatives as detailed in the 2022 activity plan provided on pages 8 to 10. Salaries for ECRs will continue to account for a large portion of the Centre budget. We anticipate that we will spend about $6.54 million in total, of which approximately $5.44 million will be allocated to salaries and scholarship stipends.

PERSONNEL

It is anticipated that the Centre will spend approximately $4.45 million in 2022 on research personnel, a large proportion of which will be ECRs.

It is expected that 27 students will be supported by CEPAR scholarships in 2022 at a total cost of $180,600. This includes scholarships for undergraduate and PhD students.

MENTORING OPPORTUNITIES FOR ECRS AND STUDENTS

CEPAR will continue to support the Emerging Researchers in Ageing (ERA) initiative in 2022 as well as offer workshops for ECRs and PhD students.

Funds will be made available to support PhD student conference participation and provide opportunities for both research fellows and PhD students to spend time at one of our partner organisations with the aims of enhancing their career experience and building links between these key hubs of ageing research and the next generation of researchers.

The anticipated cost of these initiatives in 2022 is approximately $152,000.

COLLABORATION, OUTREACH AND DISSEMINATION OF RESEARCH FINDINGS

Conferences and workshops showcase the Centre's research, increase our international footprint, and provide opportunities for our industry partners to engage with the Centre. Our research briefs and fact sheets translate research for a wider audience.

Leading international experts will visit the Centre under CEPAR's Distinguished Visitor Program and funds will be available for CEPAR personnel to visit collaborators and present research findings at major conferences (subject to pandemic-related travel restrictions). Funds will be also made available to support the involvement of our partner and associate investigators in the research program and outreach activities.

It is expected that these activities will be supported by a combination of industry and collaborating university funds. Total estimated expenditure for these activities in 2022 is $566K.

OTHER

Approximately $898,000 will be spent on supporting the operation of the Centre. This includes salaries for administrative personnel, equipment, materials and other costs associated with the running of the Centre.

An estimated additional $287,000 will be spent on other research related activities including surveys.

NEW GRANTS

NEW GRANTS AWARDED TO RESEARCH TEAMS WHICH INCLUDED CEPAR CHIEF INVESTIGATORS

ANDREI, D.M., PARKER, S.K., AND CHONG, J.X.Y.
Safe Work Australia Research Grant Program – Interventions to manage work related psychosocial hazards:

Designing SMARTer Work to Reduce Psychosocial Risks: Evaluating the Effectiveness of a Participatory Work-Redesign Intervention in Aged Care

Total amount awarded: : $373,762

SHEN, Y., SHERRIS, M., TEMPLE, J. AND ZIVEYI, J.
ARC Discovery project:

Forecasting and Financing Healthy Ageing and Aged Care in Australia

Total amount awarded: $386,139

NEW GRANTS AWARDED TO TEAMS INCLUDING CEPAR RESEARCHERS AND ASSOCIATE INVESTIGATORS ON TOPICS RELATED TO POPULATION AGEING

HILL, T,. HAMILTON, M. AND PEISAH, C.
Ageing Futures Institute Seed Grant:

Understanding Unmet Need in Aged Care: An Interdisciplinary Approach

Total amount awarded: $50,000

SINCLAIR, C.
NHMRC Research Grant:

The Enhanced Advance Care Planning and Life Review Longitudinal Intervention

Total amount awarded: $955,828

STANAWAY, F., KHALATBARI-SOLTANI, S., HSU. B., DICKSON, M., KRITHARIDES, L. AND JORM, L.
Agency for Clinical Innovation:

Ethnic Differences in Unwarranted Clinical Variation and Evidence-Based Care for Cardiovascular Disease in NSW

Total amount awarded: $30,000

VILLABRILLE, M.O. AND ZARESANI, A.
Social Science and Humanities Research Council (Canada) Insight Development Grant:

Understanding Taxpayers' Responses to Tax Policies.

Total amount awarded: CAD$54,575

AWARDS, PRIZES & RECOGNITION

JULIE AGNEW, HAZEL BATEMAN, CHRISTINE ECKERT, FEDOR ISKHAKOV AND SUSAN THORP
Recipients of the 2021 CFP Center for Financial Planning Board Best Paper Award at the annual Academic Research Colloquium for Financial Planning and Related Disciplines, for the paper 'Who Pays the Price for Bad Advice?: The Role of Financial Vulnerability, Learning and Confirmation Bias'

KAARIN ANSTEY
Recipient of the Mental Health and Prevention Senior Career Researcher Award, Mental Health & Prevention Journal, Elselvier recognising distinguished service and outstanding contributions to research

Elected as Fellow of the Australian Academy of Health and Medical Sciences recognising her outstanding contributions to cognitive ageing and dementia

MARIAN BAIRD
Recipient of the Australian Labour and Employment Relations Association Distinguished Lifetime Service Award

HAZEL BATEMAN
Appointed as Chair of Netspar's (International) Scientific Council

Recipient of the The Dean's Distinguished Leadership Award, In recognition of her meritorious and distinguished leadership and exceptional contributions to the reputation of the UNSW Business School

TSENDSUREN BATSUURI
Recipient of the Yale Fox Fellowship for 2021-2022

JULIE BYLES
Finalist, 2021 Research Australia Awards

ISABELLA DOBRESCU
Recipient of the UNSW Business School's Research Impact Award, recognising her impact outside the academic community over the past 12 months

ROSHEN FERNANDO
Annual CEPAR Workshop Best Paper Award for 'Role of Demographic Trends in the Evolution of Antimicrobial Resistance: Initial Evidence

KATJA HANEWALD
Awarded $1,000 for being the recipient of the Best Paper Award by the International Actuarial Association (IAA) Life Section, with Wang, Q., CA.

LUCINDA ILES
Annual CEPAR Workshop People's Choice Poster Award for 'Retaining Older STEM Workers: The Role of Leadership and Age Bias'

DOREEN KABUCHE
Awarded Third place: UNSW 3 Minute Thesis interfaculty final, Title: Longevity risk: Retirement product innovation and risk management strategies

MICHAEL KEANE
Elected as Fellow of The Society for Labor Economists in recognition of distinctive contributions to the field

KIM KIELY
Awarded as Australian Association of Gerontology (AAG) Distinguished Member

GEORGE KUDRNA
Recipient of the UNSW Business School's Highly Commended Research Impact Award, recognising the impact achieved outside academia and contributions to knowledge exchange

SAMAN KHALATBARI-SOLTANI
Recognised as Outstanding Capstone/ Dissertation supervisor of the year 2021, The University of Sydney, School of Public Health

Winner of the short video competition, The University of Sydney School of Public Health showcase

SUE MARKHAM
Recipient of the Faculty of Medicine and Health Executive Dean Scholarship, equivalent to a Research Training Program (RTP) Scholarship

WARWICK MCKIBBIN
Appointed to the Editorial Board of the National Institute of Economic and Social Research, London

Appointed to Fellow of the Centre for Economic Policy Research (CEPR), London

Appointed an inaugural Senior Academic Fellow at the e61 Institute

OLIVIA MITCHELL
Recipient of The Robert C. Witt Award, American Risk and Insurance Association

TIMOTHY NEAL
Recipient of 2021 Paul Bourke Award for Early Career Research, an Academy of the Social Sciences in Australia Early Career Research Award, recognising Australia's best emerging social science researchers who have achieved excellence.

SHARON PARKER
Awarded Highly Commended at the Curtin Research Awards

Recognised as one of Australia's top 40 lifetime achievers in research, chosen for the consistent excellence of their work and the impact they had in their fields, *The Australian's* 2021 Research Special Report

JOHN PIGGOTT
Awarded the UNSW Business School's Highly Commended Research Impact Award, recognising the impact achieved outside academia and contributions to knowledge exchange

MD MIJANUR RAHAMAN
Awarded the Hal Kendig Prize for Best PhD Thesis in 2020 for 'Modelling Trajectories of Aged Care Use Among Older Australian Women'

SCHOOL OF RISK & ACTUARIAL STUDIES MYBCOM DESIGN AND DEVELOPMENT TEAM

Awarded the John Prescott Award for Outstanding Teaching Innovation, CEPAR's PhD Graduate Xiao Xu and Associate Investigators Dr Katja Hanewald and Dr Andrés Villegas were part of the team, awarded in recognition of their teaching innovation that has fundamentally challenged current practice and improves student learning experiences and outcomes

YANG SHEN

Awarded the UNSW Business School's Highly Commended Research Excellence Award, recognising the highest quality of research published in the past 12 months

MICHAEL SHERRIS

Awarded the UNSW Business School's Highly Commended Research Impact Award, recognising the impact achieved outside academia and contributions to knowledge exchange

FIONA STANAWAY

Awarded the Outstanding Capstone/Dissertation supervisor of the year 2021 of the University of Sydney School of Public Health (Student nomination)

SHALLY ZHOU

Awarded the UNSW Science Faculty Prize for Best Entrant from Psychology for the One-Min Thesis Competition for 'Forever Young: Ageing from my Perspective'

DR TIMOTHY NEAL
BA BEc (Hons) Macq., PhD UNSW
SENIOR RESEARCH FELLOW

Timothy Neal is a CEPAR Senior Research Fellow located in the UNSW Business School. He joined CEPAR in July 2016 after completing a PhD in Economics at the UNSW Business School. His primary research interests include panel data econometrics, machine learning and climate change economics. Thus far he has published in leading economics journals such as *Quantitative Economics*, the *Journal of Econometrics*, and the *Econometrics Journal*.

Alongside academic research, Tim has worked as an economic consultant at Ernst & Young where he supported the development of economic reports and business cases commissioned by government for a variety of transport infrastructure projects. Notable projects included the business case for the North West Rail Link and a study into Sydney's future aviation capacity.

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