



## CEPAR LONGEVITY WORKSHOP HOSTED BY PWC

ORGANISED BY CEPAR IN CONJUNCTION WITH THE INTERNATIONAL ACTUARIAL ASSOCIATION MORTALITY WORKING GROUP

PWC SYDNEY OFFICE, FEBRUARY 15, 2017

8.45am	<b>Registration</b>
8.55am	<b>Welcome</b>
9.00am – 9.45am	<p><a href="#"><u>High-age mortality and frailty: Implications for actuarial modeling</u></a></p> <p><b>Presenter:</b> Ermanno Pitacco - Associate Investigator CEPAR and IAA Mortality Working Group</p>
9.45am – 10.30am	<p><a href="#"><u>Insights from Modelling Old-age mortality and Heterogeneity</u></a></p> <p><b>Presenter:</b> Severine Arnold - IAA Mortality Working Group</p>
10.30am – 11.00am	<b>Morning Tea</b>
11.00am – 11.45am	<p><a href="#"><u>Frailty and the risk of heterogeneity in a life annuity portfolio</u></a></p> <p><b>Presenter:</b> Annamaria Olivieri - Associate Investigator CEPAR</p>
11.45am – 12.30pm	<p><a href="#"><u>StMoMo: An R Package for Stochastic Mortality Modelling</u></a></p> <p><b>Presenter:</b> Andres Villegas – Research Fellow CEPAR</p>
12.30pm – 1.30pm	<b>Lunch</b>
1.30pm – 2.15pm	<p><a href="#"><u>Multi-State Actuarial Models of Functional Disability</u></a></p> <p><b>Presenter:</b> Adam Shao, Associate Investigator CEPAR</p>
2.15pm – 3.00pm	<p><a href="#"><u>Impact of Systematic Trend and Uncertainty on Mortality and Disability Transition Rates</u></a></p> <p><b>Presenter:</b> Michael Sherris – Chief Investigator CEPAR</p>
3.00pm – 3.45pm	<p><a href="#"><u>Longevity and Health – can we have both?</u></a></p> <p><b>Presenter:</b> Carol Jagger, AXA Professor of Epidemiology of Ageing and Deputy Director of the Newcastle University Institute for Ageing (NUIA)</p>

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### PRESENTER INFORMATION

#### Ermanno Pitacco



Ermanno Pitacco is full professor of Actuarial Mathematics, in the University of Trieste, academic director of the Master in Insurance and Risk Management at the MIB School of Management (Trieste), associate investigator CEPAR (Sydney). He is an actuary, full member of the Istituto Italiano degli Attuari (Italy), and affiliate member of the Institute and Faculty of Actuaries (UK). Visiting professor in various universities (recently: University of New South Wales, Sydney; University of Liubljana; University of Louvain-La-Neuve). He is Editor of the European Actuarial Academy Series (Springer), co-editor of the "European Actuarial Journal", and Associate Editor of the international journals "Insurance: Mathematics & Economics" and "Decisions in Economics and Finance"; member of the Actuarial Association of Europe, member of the Mortality Working Group of the IAA, and member of the Education Committee of the IAA. Main fields of scientific interest are life and health insurance mathematics and techniques, longevity

risk, portfolio valuations. He was awarded with the 1996 INA Prize for Actuarial Mathematics, from Accademia Nazionale dei Lincei, and the 2011 Bob Altling von Geusau Memorial Prize, together with Annamaria Olivieri, for the best paper published in the ASTIN Bulletin on an AFIR related topic.

#### Severine Arnold



S everine Arnold (-Gaille) is Professor in Actuarial Science at the University of Lausanne, Switzerland. Besides a PhD in Actuarial Science, she has a Certificate in Population Study from the University of Geneva, Switzerland. Her research focuses on longevity risk and mortality modeling, with a particular interest in cause-specific mortality rates. In a six and another two months research visits at the University of New South Wales in Sydney, Australia, in 2009 and 2012 respectively, she has been investigating various causes of death across countries. She is currently the project leader on a three-year research project on Cause-specific mortality interactions. Together with Corina Constantinescu (University of Liverpool, UK), she is currently organizing the third edition of the International Winter School on Perspectives on Actuarial Risks in Talks

of Young researchers (PARTY), to be held on January 8-13 2017 in Switzerland. In addition to teaching and research, she was involved in social security projects with the International Labour Organization, is a member of the International Actuarial Association (IAA) Life Section Committee, the IAA Mortality Working Group and the Social Security Sub-Committee of the AAE (Actuarial Association of Europe).

## **Annamaria Olivieri**



Annamaria Olivieri is Professor of Mathematical Methods for Economics, Actuarial Science and Finance, Department of Economics, University of Parma (Italy). She has degrees in Business Economics, University of Parma (Italy); degree in Actuarial Science and Statistics, University of Florence (Italy). PhD in Mathematics for Financial Markets, University of Brescia (Italy). She is Actuary (Italian professional body) and Associate Investigator of CEPAR, UNSW (Sydney). Her main research areas: valuation of the life insurance business, risk management for life insurance and pension funds (in particular, with reference to longevity risk), solvency for life portfolios and pension funds, actuarial perspectives of annuitisation and post-retirement choices in pension products, multistate models for the insurances of the person, pricing of life and health

insurance products. She lectures in continuous professional development courses and master programmes (in Italy and abroad) for both actuaries and non-actuaries, in the field of actuarial mathematics and insurance technique. She was awarded in 2011 with the Bob Alting von Gesau Prize 2010 (joint with Ermanno Pitacco - University of Trieste), by AFIR (section of the International Actuarial Association) for the paper "Stochastic mortality: the impact on target capital" (published on the ASTIN Bulletin, vol. 39(2), pp. 541-563).

## **Andres Villegas**



Andrés Villegas is a research fellow in the ARC Centre of Excellence in Population Ageing Research (CEPAR) at UNSW. He completed his doctoral studies at Cass Business School in London focusing on the modelling and projection of mortality. Before his doctoral studies he obtained an MSc degree in Industrial Engineering from Universidad de Los Andes (Colombia) and worked as a risk analyst at one of the biggest Colombian life insurance companies. Andrés's research interests include mortality modelling, longevity risk management and the application of optimisation techniques in actuarial science and finance.

## **Adam Wenqiang Shao**



Adam is a Senior Quantitative Analyst (Retirement Outcomes) at Mine Wealth + Wellbeing Super and is affiliated with ARC Centre of Excellence in Population Ageing Research as an associate investigator. He has qualified as an Associate of the Society of Actuaries since December 2015. His expertise include life-cycle models, pricing and risk analysis of retirement products (e.g., annuity, reverse mortgage, and long-term care insurance), solvency capital requirements, longevity risk, and multiple state health transitions modelling.

## Michael Sherris



Michael Sherris is Professor of Actuarial Studies at the Australian School of Business, UNSW, in Sydney, Australia. He is a Chief Investigator in the ARC Centre of Excellence in Population Ageing Research (CEPAR) and Deputy Director of the Australian Institute for Population Ageing Research (AIPAR). He was 2009 President of the Asia Pacific Risk and Insurance Association. He has a long involvement as both a practitioner and in teaching and research in financial and insurance risk management and actuarial science. Michael has won a number of awards for his research including the IAA Bob Alting von Gesau AFIR Prize, Casualty Actuarial Society (CAS) annual prize for the most valuable contribution to casualty actuarial science published in American Risk and Insurance Association (ARIA) literature, the Geneva Association/IIS Research

Program Shin Research Award For Excellence, the Redington Prize of the Society of Actuaries, and the H M Jackson Memorial Prize of The Institute of Actuaries of Australia. In 2007 he was awarded Actuary of the Year by the Institute of Actuaries of Australia in recognition of his contributions to actuarial research and education both internationally and within Australia. His current research interests' focus on insurer risk management, risk based capital and longevity risk modelling and management.

## Carol Jagger



Carol Jagger holds the AXA Chair in Epidemiology of Ageing in the Institute of Health and Society and leads the theme on Ageing: economic and social impact within the Newcastle University Institute for Ageing (NUIA). Her first degree was in mathematics and she holds an MSc in Statistics from the University of Leeds and a PhD in Statistics from the University of Leicester. From 1981 until 2010 she was in the Department of Health Sciences at the University of Leicester. She has an Honorary Visiting Fellowship at the Department of Public Health and Primary care, University of Cambridge, is a Fellow of the Faculty of Public Health (by distinction), Fellow of the Royal Statistical Society (C.Stat) and Chartered Scientist (CSci), Honorary Fellow of the Institute and Faculty of Actuaries, Fellow of the Gerontological Society of America and Member of the British Geriatrics Society.

**Numbers for this event are strictly limited with registration essential.**

To register, email your name, affiliation, position and any dietary requirements you may have to [a.brushwood@unsw.edu.au](mailto:a.brushwood@unsw.edu.au). You will receive confirmation of your registration via email which will validate your participation in the event.