

# Curriculum Vitae

## Professor BENJAMIN AVANZI (PhD, Actuary SAA, CERA, GAICD)

Office Address: Department of Economics  
The University of Melbourne  
Level 3, Office 323  
111 Barry Street  
Carlton VIC 2053  
Australia

Office Phone: +61 3 8344 8667  
[b.avanzi@unimelb.edu.au](mailto:b.avanzi@unimelb.edu.au)

Websites: <http://www.benjaminavanzi.com>  
<https://communicate-data-with-r.netlify.app>  
<https://actl10001.netlify.app>  
<https://gim-am3.netlify.app>  
<https://github.com/agi-lab>

Date of CV: 3 August 2023

### Academic qualifications

- 2008 PhD University of Lausanne, Faculty of Business and Economics (HEC Lausanne), Actuarial Science (supervisor: Prof. Hans U. Gerber)
- 2005 Lic Oec University of Lausanne, Faculty of Business and Economics (HEC Lausanne), Business, major in Actuarial Science

### Professional qualifications

- Actuary SAA *Fully Qualified Actuary* with the Swiss Association of Actuaries (Fully recognised within the Actuarial Association of Europe)
- CERA *Chartered Enterprise Risk Actuary* via the Australian Actuaries Institute  
CERA Global <https://ceraglobal.org/>
- GAICD Graduate member of the Australian Institute of Company Directors  
Company Director Course (CDC), 2022

### Academic appointments

- 2020 – Professor (Full) of Actuarial Studies, Centre of Actuarial Studies, Department of Economics  
Faculty of Business and Economics, University of Melbourne, Australia
- 2017 – 2018 Chair, UNSW Business School 3+ Reference Group  
UNSW Australia Business School, University of New South Wales (UNSW), Australia
- 2015 – 2017 Associate Head of School, School of Risk and Actuarial Studies  
UNSW Australia Business School, University of New South Wales (UNSW), Australia
- 2015 – 2020 Associate Professor of Actuarial Studies, School of Risk and Actuarial Studies  
UNSW Australia Business School, University of New South Wales (UNSW), Australia
- 2015 – 2018 Professeur associé en actuariat<sup>1</sup>, Département de Mathématiques et de Statistique  
Faculté des Arts et des Sciences, Université de Montréal (UdeM), Canada
- 2013 – 2015 Professeur agrégé en actuariat<sup>2</sup>, Département de Mathématiques et de Statistique  
Faculté des Arts et des Sciences, Université de Montréal (UdeM), Canada
- 2013 – 2015 Adjunct Associate Professor, School of Risk and Actuarial Studies  
UNSW Australia Business School<sup>3</sup>, University of New South Wales (UNSW), Australia
- 2010 – 2013 Senior Lecturer of Actuarial Studies, School of Risk and Actuarial Studies  
Australian School of Business, University of New South Wales, Australia
- 2008 – 2010 Lecturer of Actuarial Studies, School of Actuarial Studies  
Australian School of Business, University of New South Wales, Australia
- 2005 – 2008 Various casual lecturer positions, University of Lausanne & Bordeaux Business School
- 2003 – 2008 Teaching and Research assistant, University of Lausanne

### Referees

Available upon request.

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<sup>1</sup>'Adjunct Professor' of Actuarial Science

<sup>2</sup>'Associate Professor' of Actuarial Science

<sup>3</sup>Formerly 'Australian School of Business'

## RESEARCH

### Overview of research expertise

I am a Swiss actuary and my current field of research is in insurance risk and capital. In particular, I develop stochastic models for the understanding, management, forecasting and transfer of risks.

Recent topics include:

- dependence structures between general insurance lines of business (relevant to claims reserving, economic capital, pricing and capital allocation),
- the optimal control of risk theoretical surplus models (stylised equity (capital) models for risk businesses) for the purpose of reinsurance and stability,
- the modelling of complex claims processes, and
- the application of machine learning techniques for the enhancement or extension of existing actuarial techniques (such as claims reserving, model error, non discrimination pricing).

In the past I have also made contributions to the literature in pensions and operations management, and was Executive Chairman of a pension fund in Switzerland before becoming a full time academic.

### Fields of Research<sup>4</sup>

Primary:

- 3502 Banking, finance and investment (350206 Insurance studies, and 350208 Investment and risk management)
- 4905 Statistics (490501 Applied statistics, 490508 Statistical data science, and 490510 Stochastic analysis and modelling)
- 4901 Applied mathematics (490106 Financial mathematics, and 490108 Operations research)

Secondary:

- 3801 Applied economics (380107 Financial economics)
- 3802 Econometrics (380202 Econometric and statistical methods)
- 4903 Numerical and computational mathematics (490304 Optimisation)

### Major awards

- |      |  |
|------|--|
| 2023 | <b>Hachemeister Prize</b> , awarded by the Casualty Actuarial Society (CAS) for the paper <a href="#">Ensemble distributional forecasting for insurance loss reserving</a> which was presented at the 2022 ASTIN Colloquium.   |
| 2022 | <b>Highly Commended Paper Prize</b> , awarded by United Kingdom <a href="#">Institute and Faculty of Actuaries</a> for the paper <a href="#">SPLICE: A Synthetic Paid Loss and Incurred Cost Experience Simulator</a> (published in the Annals of Actuarial Science)   |
| 2018 | <b>Taylor Fry General Insurance Seminar Silver Prize</b> , awarded by an independent panel for the paper <a href="#">How to proxy the unmodellable: Analysing granular insurance claims in the presence of unobservable or complex drivers</a> (Australian Actuaries Institute General Insurance Seminar, November 2018) |
| 2017 | <b>Hachemeister Prize</b> , awarded by the Casualty Actuarial Society (CAS) for the paper <a href="#">Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations</a> (2016, ASTIN Bulletin, 46:2)  |

<sup>4</sup>See, e.g., <https://rms.arc.gov.au/RMS/Proposal/Reference/For20Codes>.

## Publications

Metrics (as of 3 August 2023)

[Google Scholar](#): 1278 citations,  $h$ -index of 17 (since 2018: 651 citations,  $h$ -index of 14)

[Scopus profile](#): 693 citations,  $h$ -index of 11

[ResearchGate](#): Research Interest of 536.9 (88%ile of all RG members, 94%ile of all RG “Risk Management and Insurance” members),  $h$ -index of 15 (13 when self-citations are excluded)

Submitted journal articles

- 2023 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
[Machine learning with high-cardinality categorical features in actuarial applications](#)  
Under revision before resubmission
- 2023 2. **Avanzi, B.**, Li, Y., Wong, B., Xian, A.  
[Ensemble distributional forecasting for insurance loss reserving](#)  
Under revision before resubmission, Awarded 2023 Hachemeister Prize
- 2023 3. **Avanzi, B.**, Lau, H., Steffensen, M.  
[Optimal reinsurance design under solvency constraints](#)  
Resubmitted

Peer-reviewed journal articles

Accepted manuscripts can be downloaded for free from [here \(2008-2019\)](#) and [here \(2017-\)](#) in accordance with the journals' copyright regulations.

- 2023 4. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.  
[Detection and treatment of outliers for multivariate robust loss reserving](#)  
[Q1,A]<sup>5</sup> [Annals of Actuarial Science](#), in press
- 2023 5. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.  
[On the impact of outliers in loss reserving](#)  
[Q2,B] [European Actuarial Journal](#), in press
- 2023 6. **Avanzi, B.**, Kusch Falden, D., Steffensen, M.  
[Stable Dividends under Linear-Quadratic Optimization](#)  
[Q1,A] [Quantitative Finance](#), in press
- 2023 7. **Avanzi, B.**, Taylor, G., Wang, M.  
[SPLICE: A Synthetic Paid Loss and Incurred Cost Experience Simulator](#)  
[Q1,A] [Annals of Actuarial Science \(Actuarial Software\)](#), Vol. 17, Issue 1, pp. 7–35.
- 2023 8. **Avanzi, B.**, Chen, P., Henriksen, L. F. B., Wong, B.  
[On the surplus management of funds with assets and liabilities in presence of solvency requirements](#)  
[Q1,A,DL] [Scandinavian Actuarial Journal](#), Volume 2023, Issue 5, pp. 477–508.
- 2022 9. Al-Mudafer, M. T., **Avanzi, B.**, Taylor, G., Wong, B.  
[Stochastic loss reserving with mixture density neural networks](#)  
[Q1,A\*,DL] [Insurance: Mathematics and Economics](#), Vol. 105, pp. 144–174
- 2021 10. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
[SynthETIC: an individual insurance claim simulator with feature control](#)  
[Q1,A\*,DL] [Insurance: Mathematics and Economics](#), Vol. 100, pp. 296–308
- 2021 11. **Avanzi, B.**, Lau, H., Wong, B.  
[On the optimality of joint periodic and extraordinary dividend strategies](#)  
[Q1,A\*] [European Journal of Operational Research](#), Vol. 295, issue 3, pp. 1189–1210
- 2021 12. **Avanzi, B.**, Boglioni Beaulieu, G., Lafaye de Micheaux, P., Wong, B.  
[A Counterexample to the Central Limit Theorem for Pairwise Independent Random Variables Having a Common Absolutely Continuous Arbitrary Margin](#)  
[Q1,n/a] [Journal of Mathematical Analysis and Applications](#), Vol. 499, Issue 1, 124982

<sup>5</sup>[Quartile according to [Scimago](#) 2022, Journal rank according to the latest ABDC 2019 list. “FT50” means it is part of the 50 journals used in the FT research rank. “DL” means it appears on the Dean’s List.]

- 2021 13. **Avanzi, B.**, Taylor, G., Wong, B., Yang, X.  
*On the modelling of multivariate counts with Cox processes and dependent shot noise intensities*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 99, pp. 9–24
- 2021 14. **Avanzi, B.**, Lau, H., Wong, B.  
*Optimal Periodic Dividend Strategies for Spectrally Negative Lévy Risk Processes With Fixed Transaction Costs*  
[Q1,A,DL] *Scandinavian Actuarial Journal*, Vol. 2021, Issue 8, pp. 645–670
- 2021 15. **Avanzi, B.**, Taylor, B., Wong, B., Xian, A.  
*Modelling and understanding count processes through a Markov-modulated non-homogeneous Poisson process framework*  
[Q1,A\*] *European Journal of Operational Research*, Vol. 290, Issue 1, pp. 177–195
- 2021 16. **Avanzi, B.**, Taylor, B., Vu, P. A., Wong, B.  
*On Unbalanced Data and Common Shock Models in Stochastic Loss Reserving*  
[Q1,A] *Annals of Actuarial Science*, Vol. 15, Issue 1, pp. 173–203
- 2020 17. **Avanzi, B.**, Lau, H., Wong, B.  
*Optimal Periodic Dividend Strategies for Spectrally Positive Lévy Risk Processes With Fixed Transaction Costs*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 93, pp. 315–332
- 2020 18. **Avanzi, B.**, Taylor, B., Vu P. A., Wong, B.  
*A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Reserving*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 93, pp. 50–71
- 2018 19. **Avanzi, B.**, Taylor, B., Wong, B.  
*Common shock models for claim arrays*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 48, Issue 3, pp. 1109–1136
- 2018 20. **Avanzi, B.**, Tu, V., Wong, B.  
*Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 79, pp. 225–242
- 2018 21. **Avanzi, B.**, Henriksen, L. F. B., Wong, B.  
*On the distribution of the excedents of funds with assets and liabilities in presence of solvency and recovery requirements*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 48, Issue 2, pp. 647–672.
- 2017 22. **Avanzi, B.**, Pérez, J.-L., Wong, B., Yamazaki, K.  
*On optimal joint reflective and refractive dividend strategies in spectrally positive Lévy models*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 72, pp. 148–162.
- 2016 23. **Avanzi, B.**, Taylor, G., Vu, P. A., Wong, B.  
*Stochastic Loss Reserving with Dependence: A Flexible Multivariate Tweedie Approach*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 71, pp. 63–78.
- 2016 24. **Avanzi, B.**, Tu, V., Wong, B.  
*On the interface between optimal periodic and continuous dividend strategies in the presence of transaction costs*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 46, Issue 3, pp. 709–746.
- 2016 25. **Avanzi, B.**, Wong, B., Yang, X.  
*A micro-level claim count model with overdispersion and reporting delays*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 71, pp. 1–14.
- 2016 26. **Avanzi, B.**, Taylor, G., Wong, B.  
*Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 46, Issue 2, pp. 225–263.
- 2016 27. **Avanzi, B.**, Tao, J., Wong, B., Yang, X.  
*Capturing Non-Exchangeable Dependence in Multivariate Loss Processes with Nested Archimedean Lévy Copulas*  
[Q1,A] *Annals of Actuarial Science*, Vol. 10, Issue 01, pp. 87–117.

- 2016 28. **Avanzi, B.**, Tu, V., Wong, B.  
*A note on realistic dividends in actuarial surplus models*  
[Q2,B] *Risks*, Vol. 4, Issue 4, Number 37
- 2014 29. **Avanzi, B.**, Tu, V., Wong, B.  
*On optimal periodic dividend strategies in the dual model with diffusion*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 55, pp. 210–224.
- 2014 30. de Treville, S., Schürhoff, N., Trigeorgis, L., **Avanzi, B.**  
*Optimal Sourcing and Lead-Time Reduction under Evolutionary Demand Risk*  
[Q1,A\*,FT50,DL] *Production and Operations Management*, Vol. 23, Issue 12, pp. 2103–2117.
- 2014 31. **Avanzi, B.**, Purcal, S.  
*Annuity and cross-subsidies in a two-tiered retirement saving system*  
[Q1,A] *Annals of Actuarial Science*, Vol. 8, Part 2, pp. 234–252.
- 2013 32. **Avanzi, B.**, Cheung, E. C. K., Wong, B., Woo, J. K.  
*On a periodic dividend barrier strategy in the dual model with continuous monitoring of solvency*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 52, Issue 1, pp. 98–113.
- 2013 33. **Avanzi, B.**, Bicer, I., de Treville, S., Trigeorgis, L.  
*Real Options at the Interface of Finance and Operations: Exploiting Embedded Supply Chain Real Options to Gain Competitiveness*  
[Q1,A] *European Journal of Finance*, Vol. 19, Issue 7-8, pp. 760–778.
- 2012 34. **Avanzi, B.**, Wong, B.  
*On a mean reverting dividend strategy with Brownian motion*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 51, Issue 2, pp. 229–238.
- 2011 35. **Avanzi, B.**, Shen, J., Wong, B.  
*Optimal dividends and capital injections in the dual model with diffusion*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 41, Issue 2, pp. 611–644.
- 2011 36. **Avanzi, B.**, Cassar, L. C., Wong, B.  
*Modelling Dependence in Insurance Claims Processes with Lévy Copulas*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 41, Issue 2, pp. 575–609.
- 2010 37. **Avanzi, B.**  
*What is it that makes the Swiss annuitise? A description of the Swiss retirement system*  
[n/a,n/a] *Australian Actuarial Journal*, Vol. 16, Issue 2, pp. 135–162.
- 2009 38. **Avanzi, B.**  
*Strategies for Dividend Distribution: A Review*  
[Q2,A] *North American Actuarial Journal*, Vol. 13, Issue 2, pp. 217–251.
- 2008 39. de Treville, S., Edelson, N. M., Kharkar, A. N., **Avanzi, B.**  
*Constructing useful theory: The case of Six Sigma*  
[Q1,C] *Operations Management Research*, Vol. 1, Issue 1, pp. 15–23.
- 2008 40. **Avanzi, B.**, Gerber, H. U.  
*Optimal dividends in the dual model with diffusion*  
[Q1,A,DL] *ASTIN Bulletin*, Vol. 38, Issue 2, pp. 653–667.
- 2007 41. **Avanzi, B.**, Gerber, H. U., Shiu, E. S. W.  
*Optimal dividends in the dual model*  
[Q1,A\*,DL] *Insurance: Mathematics and Economics*, Vol. 41, Issue 1, pp. 111–123.

## Conference publications

- 2018 1. **Avanzi, B.**, Taylor, G., Wong, B., Xian, A.  
*How to proxy the unmodellable: Analysing granular insurance claims in the presence of unobservable or complex drivers*  
Proceedings of the Actuaries Institute *2018 General Insurance Seminar* (peer reviewed), 12-13 November 2018 (Sydney, Australia)
- 2016 2. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.  
*On the Impact, Detection and Treatment of Outliers in Robust Loss Reserving*  
Proceedings of the Actuaries Institute *2016 General Insurance Seminar* (peer reviewed), 13-15 November 2016 (Melbourne, Australia)

- 2010 3. **Avanzi, B.**, Wong, B.  
*On a mean reverting dividend strategy with Brownian motion*  
6th Conference in Actuarial Science & Finance on Samos (Samos, Greece)
- 2006 4. **Avanzi, B.**, de Terville, S.  
*Demand Estimation Through Credibility Theory*  
17th Annual Conference of POMS (Boston, U.S.A.)
- 2005 5. de Terville, S., Edelson, N. M., Kharkar, A. N., **Avanzi, B.**  
*Can we develop theory around Six Sigma? Should we care?*  
16th Annual Conference of POMS (Chicago, U.S.A.)
- 2004 6. Boisvert, C., de Terville, S., Oyon, D., **Avanzi, B.**  
*The Impact of Performance Measurement Systems on Lead Time Reduction*  
CRITOM Conference (Bocconi University, Italy)

## R codes and illustrations

- 2021 1. **Avanzi, B.**, Taylor, G., Wang, M.  
CRAN package: *SPLICE: Synthetic Paid Loss and Incurred Cost Experience (SPLICE) Simulator*  
<https://CRAN.R-project.org/package=SPLICE>
- 2020 2. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
CRAN package: *SynthETIC: an individual insurance claim simulator with feature control*  
<https://CRAN.R-project.org/package=SynthETIC>

Other R codes related to published papers, with several reproducible examples, are available from the GitHub page of Agi-Lab.

## Websites

- 2022 1. **Avanzi, B.**  
[General Insurance Modelling - AMIII](#)  
(website for UniMelb ACTL30007/ACTL90020 - Sections 1 and 2 of the CS2 actuarial syllabus)
- 2021 2. **Avanzi, B.**  
[Introduction to Actuarial Studies](#)  
(website for UniMelb ACTL10001)
- 2021 3. **Avanzi, B.**, Boglioni Beaulieu, G., Lafaye de Micheaux, P., Xian, A., Yang, X.  
[Communicate data with R](#)

## Working papers

[Recent working papers on arXiv \(updated with accepted manuscript versions\)](#)

[Older working papers on SSRN \(not updated\)](#)

- 2023 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
*Machine Learning with High-Cardinality Categorical Features in Actuarial Applications*  
arXiv stat.ML 2301.12710
- 2022 2. **Avanzi, B.**, Kusch Falden, D., Steffensen, M.  
*Stable Dividends under Linear-Quadratic Optimization*  
arXiv math.OC 2210.03494
- 2022 3. **Avanzi, B.**, Li, Y., Wong, B., Xian, A.  
*Ensemble distributional forecasting for insurance loss reserving*  
arXiv stat.ME 2206.08541
- 2022 4. **Avanzi, B.**, Lau, H., Steffensen, M.  
*Optimal reinsurance under terminal value constraints*  
arXiv math.OC 2203.16108
- 2022 5. **Avanzi, B.**, Chen, P., Henriksen, L. F. B., Wong, B.  
*On the surplus management of funds with assets and liabilities in presence of solvency requirements*  
arXiv math.OC 2203.05139
- 2022 6. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.  
*Detection and treatment of outliers for multivariate robust loss reserving*  
arXiv stat.ME 2203.03874

- 2022 7. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.  
*On the impact of outliers in loss reserving*  
arXiv stat.ME 2203.00184
- 2021 8. **Avanzi, B.**, Taylor, G., Wang, M.  
*SPLICE: A Synthetic Paid Loss and Incurred Cost Experience Simulator*  
arXiv Qfin.RM 2109.04058
- 2021 9. Al-Mudafer, M. T., **Avanzi, B.**, Taylor, G., Wong, B.  
*Stochastic loss reserving with mixture density neural networks*  
arXiv stat.ME 2108.07924
- 2020 10. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
*SynthETIC: an individual insurance claim simulator with feature control*  
arXiv Qfin.RM 2008.05693
- 2020 11. **Avanzi, B.**, Lau, H., Wong, B.  
*Optimal Periodic Dividend Strategies for Spectrally Negative Lévy Risk Processes With Fixed Transaction Costs*  
arXiv Math.OC 2004.01838
- 2020 12. **Avanzi, B.**, Boglioni Beaulieu, G., Lafaye de Micheaux, P., Wong, B.  
*A Counterexample to the Central Limit Theorem for Pairwise Independent Random Variables Having a Common Absolutely Continuous Arbitrary Margin*  
arXiv Math.PR 2003.01350
- 2019 13. **Avanzi, B.**, Taylor, B., Vu P. A., Wong, B.  
*A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Reserving*  
UNSW Business School Research Paper No. 2019ACTL03
- 2019 14. **Avanzi, B.**, Taylor, B., Wong, B., Yang, X.  
*A Multivariate Micro-Level Insurance Counts Model With a Cox Process Approach*  
UNSW Business School Research Paper No. 2019ACTL02
- 2019 15. **Avanzi, B.**, Taylor, B., Wong, B., Xian, A.  
*Inference of counts using Markov-modulated non-homogeneous Poisson processes*  
UNSW Business School Research Paper No. 2019ACTL01
- 2018 16. **Avanzi, B.**, Lau, H., Wong, B.  
*Optimal Periodic Dividend Strategies for Spectrally Positive Lévy Risk Processes With Fixed Transaction Costs*  
UNSW Business School Research Paper No. 2018ACTL02
- 2018 17. **Avanzi, B.**, Taylor, B., Vu, P. A., Wong, B.  
*On Unbalanced Data and Common Shock Models in Stochastic Loss Reserving*  
UNSW Business School Research Paper No. 2018ACTL01
- 2017 18. **Avanzi, B.**, Tu, V., Wong, B.  
*Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times*  
UNSW Business School Research Paper No. 2017ACTL02
- 2016 19. **Avanzi, B.**, Taylor, B., Wong, B.  
*Common shock models for claim arrays*  
UNSW Business School Research Paper No. 2016ACTL07
- 2016 20. **Avanzi, B.**, Pérez, J.-L., Wong, B., Yamazaki, K.  
*On optimal joint reflective and refractive dividend strategies in spectrally positive Lévy processes*  
UNSW Business School Research Paper No. 2016ACTL05
- 2016 21. **Avanzi, B.**, Henriksen, L. F. B., Wong, B.  
*On the distribution of the excedents of funds with assets and liabilities in presence of solvency and recovery requirements*  
UNSW Business School Research Paper No. 2016ACTL03
- 2016 22. **Avanzi, B.**, Taylor, G., Vu, P. A., Wong, B.  
*Stochastic Loss Reserving with Dependence: A Flexible Multivariate Tweedie Approach*  
UNSW Business School Research Paper No. 2016ACTL01



- 2015 23. **Avanzi, B.**, Wong, B., Yang, X.  
*A micro-level claim count model with overdispersion and reporting delays*  
UNSW Business School Research Paper No. 2015ACTL25
- 2015 24. **Avanzi, B.**, Tu, V., Wong, B.  
*A note on realistic dividends in actuarial surplus models*  
UNSW Business School Research Paper No. 2015ACTL20
- 2015 25. **Avanzi, B.**, Gagné, C., Tu, V.  
*Is Gamma Frailty a Good Model? Evidence from Canadian Pension Funds*  
UNSW Business School Research Paper No. 2015ACTL15
- 2015 26. **Avanzi, B.**, Taylor, G., Wong, B.  
*Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations*  
UNSW Business School Research Paper No. 2015ACTL11
- 2015 27. **Avanzi, B.**, Tu, V., Wong, B.  
*On the interface between optimal periodic and continuous dividend strategies in the presence of transaction costs*  
UNSW Business School Research Paper No. 2015ACTL10
- 2014 28. **Avanzi, B.**, Tao, J., Wong, B., Yang, X.  
*Capturing Non-Exchangeable Dependence in Multivariate Loss Processes with Nested Archimedean Lévy Copulas*  
UNSW Australian School of Business Research Paper No. 2014ACTL05
- 2013 29. **Avanzi, B.**, Tu, V., Wong, B.  
*On optimal periodic dividend strategies in the dual model with diffusion*  
UNSW Australian School of Business Research Paper No. 2013ACTL17
- 2012 30. **Avanzi, B.**, Cheung, E.C.K, Wong, B., Woo, J.K.  
*On a Periodic Dividend Barrier Strategy in the Dual Model with Continuous Monitoring of Solvency*  
UNSW Australian School of Business Research Paper No. 2012ACTL07
- 2012 31. de Treville, S., Schürhoff, N., Trigeorgis, L., **Avanzi, B.**  
*Optimal Sourcing and Lead-Time Reduction Under Evolutionary Demand Risk*  
University of Lausanne Working Paper
- 2011 32. **Avanzi, B.**, Cassar, L. C., Wong, B.  
*Modelling Dependence in Insurance Claims Processes with Lévy Copulas*  
UNSW Australian School of Business Research Paper No. 2011ACTL01
- 2010 33. de Treville, S., **Avanzi, B.**, Bicer, I., Trigeorgis, L.  
*Real Options at the Interface of Finance and Operations: Exploiting Embedded Supply Chain Real Options to Gain Competitiveness*  
UNSW Australian School of Business Research Paper No. 2010ACTL16
- 2010 34. **Avanzi, B.**, Shen, J., Wong, B.  
*Optimal dividends and capital injections in the dual model with diffusion*  
UNSW Australian School of Business Research Paper No. 2010ACTL15
- 2009 35. **Avanzi, B.**, Wong, B.  
*On a mean reverting dividend strategy with Brownian motion*  
UNSW Australian School of Business Research Paper No. 2009ACTL12
- 2009 36. **Avanzi, B.**, Purcal, S.  
*Forced savings and annuitisation with cross-subsidies: a mutation of the beast*  
UNSW Australian School of Business Research Paper No. 2009ACTL09
- 2009 37. **Avanzi, B.**  
*What is it that makes the Swiss annuitize? A description of the Swiss retirement system*  
UNSW Australian School of Business Research Paper No. 2009ACTL06
- 2008 38. de Treville, S., **Avanzi, B.**, Trigeorgis, L.  
*Rethinking Lead Time Reduction Investment: A Real Options Perspective*  
UNSW Australian School of Business Research Paper No. 2008ACTL16



- 2008 39. **Avanzi, B.**, Gerber, H. U.  
*Optimal dividends in the dual model with diffusion*  
UNSW Australian School of Business Research Paper No. 2008ACTL10
- 2008 40. **Avanzi, B.**  
*A Review of Modern Collective Risk Theory with Dividend Strategies*  
UNSW Australian School of Business Research Paper No. 2008ACTL09

## Research Funding

### National Competitive Grants

- 2020 – 2022 [Australian Research Council \(ARC\) Discovery Project DP200101859](#)  
AUD 310,000 from ARC  
*Extreme Value Theory Approaches to Insurance in a Catastrophic Environment*  
Prof Qihe Tang (UNSW); A/Prof Benjamin Avanzi (University of Melbourne); A/Prof Bernard Wong (UNSW); A/Prof Jose Blanchet (Stanford)
- 2015 – 2020 Chief Investigator  
Natural Sciences and Engineering Research Council (NSERC) of Canada, CAD 70,000  
*Actuarial methods for assessing diversification effects in insurance*  
Note: Funding for 2016–2020 (CAD 56,000) lapsed due to my return to Australia.
- 2013 – 2020 [Australian Research Council \(ARC\) Linkage Project LP130100723](#)  
AUD 232,449 from ARC, and AUD 88,412 from Industry Partners  
*Modelling claim dependencies for the general insurance industry with economic capital in view: an innovative approach with stochastic processes*  
Dr Benjamin Avanzi (UNSW); Dr Bernard Wong (UNSW); Dr Gregory Taylor (UNSW); Mr Stephen Britt (Insurance Australia Group Ltd); Mr Yusuf Cakan (Suncorp Group Ltd); Mr David Koob (Allianz Australia Ltd)

### Other Competitive Grants

- 2021 – 2024 Co-Partner Investigator (with Rui Zhou from University of Melbourne, and Katrien Antonio and Jan Dhaene from KU Leuven)  
Global PhD Partnership KU Leuven/Melbourne GPP/21/003, 2 full PhD scholarship with travel budget, and about AUD 50,000 cash support for Partner Investigators  
*VALERIA: Valuation and Advanced Learning methods for Emerging, global Risks In Actuarial science*
- 2019 – 2019 Chief Investigator (with Pierre Lafaye de Micheaux)  
Business School and Faculty of Science Silver Star, AUD 20,000  
*Complex dependence modelling to unravel relationships in Big Data*
- 2017 – 2018 Chief Investigator (with Greg Taylor and Bernard Wong)  
Business School Linkage Silver Star, AUD 40,000  
*Quantitative risk management and optimal control for general insurers*  
Partners: Insurance Australia Group Ltd; Suncorp Group Ltd
- 2015 – 2015 Chief Investigator (with Greg Taylor and Bernard Wong)  
Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 10,000  
*General forms of dependency in chain ladder structures*
- 2012 – 2013 Chief Investigator (with Greg Taylor and Bernard Wong)  
Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 35,000  
*An innovative approach to stochastic claims reserving with dependence*
- 2012 – 2012 Chief Investigator  
Australian School of Business Special Research Grant, AUD 9,000  
*Towards more realistic dividend strategies in surplus models for risk businesses*
- 2011 – 2011 Chief Investigator (with Bernard Wong)  
Australian School of Business Research Grant, AUD 25,000  
*Optimal dividend problems in surplus models with stochastic firm prospects*
- 2010 – 2011 Chief Investigator (with Bernard Wong)  
Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 20,000  
*On the economic value of aggregating dependent portfolios*
- 2009 – 2009 Chief Investigator (with John Evans)  
UNSW 2009 International Research Collaboration Scheme, AUD 7,250  
*Cross-country study of social security and superannuation systems in Australia, Switzerland, and the Philippines*
- 2009 – 2009 Chief Investigator, Australian School of Business Research Grant, AUD 18,000  
*Mathematical modelling of the capital of risk businesses with dividend pay-outs*

### Other Funding

- 2016 – 2016 Network leader, School of Risk and Actuarial Studies “Insurance Risk and Capital” network, seed funding of AUD 5,000.

## Supervision

### PhD students supervision

- 2023 – TBA (University of Melbourne and KU Leuven - joint PhD with scholarship, joint supervisor)  
*Position to fill*
- 2023 – Gerry Li (UNSW with DP scholarship, external supervisor)  
*In progress*
- 2022 – Eric Dong (UNSW with scholarship, external supervisor)  
*In progress*
- 2022 – Xingyun (Claire) Tan (University of Melbourne with scholarship, co-supervisor)  
*In progress*
- 2022 – Jim (Yanfeng) Li (UNSW with scholarship, external supervisor)  
*In progress*
- 2021 – Lorenzo Marchi  
(KU Leuven, external joint supervisor)  
*In progress*
- 2021 – Athibav Chaudhry  
(University of Melbourne and KU Leuven - joint PhD with scholarship, co-supervisor)  
*In progress*
- 2019 – Yunshen Yang (UNSW Scientia Scholar, joint, then external joint supervisor)  
*In progress*
- 2017 – 2023 Guillaume Boglioni-Beaulieu  
(UNSW with UIPA and Canadian scholarships, joint, then external joint supervisor)  
*Now (tenured) Lecturer at Macquarie University, Sydney*
- 2016 – 2022 Alan Xian (UNSW with APA, joint, then external supervisor)  
*Dean's Award for Outstanding PhD Theses*  
*Now Consultant at Taylor Fry Consulting, Sydney, and Adjunct Fellow at Macquarie University, Sydney.*
- 2016 – 2020 Ka Wai (Hayden) Lau (UNSW with UIPA, joint supervisor)  
*Now Pricing Analyst at Insurance Australia Group (IAG), Sydney.*
- 2014 – 2019 Phuong Anh Vu (UdeM and UNSW with APA - joint PhD, joint supervisor)  
Awarded at UNSW, Awarded at UdeM (with "exceptional" performance)  
*FIAA, CERA now at Munich Re, USA.*
- 2013 – 2017 Xinda Yang (UNSW with UIPA, joint supervisor)  
*Now Senior Pricing Manager at QBE Insurance, Sydney.*
- 2013 – 2017 Vincent Tu (UNSW with APA, joint supervisor)  
*FIAA, Now Manager at Taylor Fry Consulting, Sydney.*

### MPhil students supervision

- 2015 – 2016 Guillaume Boglioni-Beaulieu, with "exceptional" performance (UdeM, joint superv.)  
*PhD UNSW; Now (tenured) Lecturer at Macquarie University, Sydney*
- 2014 – 2015 Gwendal Combout, with "excellent" performance (UdeM, main supervisor)  
*Quantitative Finance (M2) graduate from École polytechnique, France.*

### Masters' Essay students supervision

- 2020 – 2021 Xingyun (Claire) Tan (ACTL90012, University of Melbourne, main supervisor)

### Honours students supervision

- 2023 Lewis de Felice (University of Melbourne, main supervisor)
- 2022 Melantha (Chenyi) Wang, Honours Class 1, and the University Medal (UNSW, external supervisor)  
*Now at VivCourt Trading, Sydney.*
- 2021 Jim (Yanfeng) Li, Honours Class 1, and the University Medal (UNSW, external supervisor)  
*Now PhD student at UNSW.*

- 2021 David Yu, Honours Class 1 (UNSW, external supervisor)  
*Now at Insurance Australia Group (IAG), Melbourne.*
- 2020 Muhammed Al-Mudafer, Honours Class 1 (UNSW, external supervisor)  
*Now at Insurance Australia Group (IAG), Sydney.*
- 2016 Mark Lavender, Honours Class 1 and the University Medal (UNSW, joint supervisor)  
*Now Investment Banking Associate at William Blair, San Francisco (USA).*
- 2015 Alan Xian, Honours Class 1 and the University Medal (UNSW, joint supervisor)  
*PhD UNSW, Now Consultant at Taylor Fry Consulting, Sydney, and Lecturer at Macquarie University, Sydney.*
- 2014 Clement Yeung, Honours Class 2:1 (UNSW, external supervisor)  
*Now Senior Data Scientist at Loan Market, Sydney.*
- 2013 Phuong Anh Vu, Honours Class 1 (UNSW, joint supervisor)  
*PhD UNSW and Université de Montréal, FIAA*  
*Now Manager at Taylor Fry Consulting, Sydney.*
- 2012 Chung-Yu Liu, Honours Class 1 (UNSW, joint supervisor)  
*Now Pricing Specialist at Insurance Australia Group (IAG), Sydney.*
- 2012 Vincent Tu, Honours Class 1 (UNSW, joint supervisor)  
*PhD UNSW, FIAA; Now Manager at Taylor Fry Consulting, Sydney.*
- 2011 Jamie Tao, Honours Class 1 (UNSW, joint supervisor)  
*Now Vice President, APAC Treasury at Jefferies, Hong Kong.*
- 2011 Timothy Yip, Honours Class 1 (UNSW, joint supervisor)  
*FIAA, Now Director at Taylor Fry Consulting, Sydney.*
- 2010 Luke Cassar, Honours Class 1 (UNSW, joint supervisor)  
*FIAA, Now Senior Consultant at Finity Consulting, Sydney.*
- 2010 Jonathan Shen, Honours Class 1 and the University Medal (UNSW, joint supervisor)  
*FIAA, Now Head of Data & Analytics at Teachers Health, Sydney.*

**Referee and review activities**

## Editorial duties

- 2018 – *ASTIN Bulletin*, Editor
- 2018 – *Insurance: Mathematics and Economics*, Associate Editor
- 2018 – 2018 *ASTIN Bulletin*, Member of the Editorial Board
- 2016 – *Risks*, Member of the Editorial Board

Journals refereed ([Publons](#))

Operations Research  
 European Journal of Operational Research  
 Insurance: Mathematics and Economics  
 ASTIN Bulletin  
 Scandinavian Actuarial Journal  
 North American Actuarial Journal  
 Journal of Risk and Insurance  
 Annals of Actuarial Science  
 The Geneva Papers on Risk and Insurance: Issues and Practice  
 Asia-Pacific Journal of Risk and Insurance  
 European Actuarial Journal  
 Variance (CAS Publications)  
 Risks  
 Mathematical Finance  
 Statistics and Probability Letters  
 Journal of Applied Probability / Advances in Applied Probability  
 Journal of Computational and Applied Mathematics  
 Journal of Optimization Theory and Applications  
 SIAM Journal on Control and Optimization  
 Stochastic Models  
 Economic Modelling  
 Expert Systems with Applications  
 Communications in Statistics - Theory and Methods  
 Applied Stochastic Models in Business and Industry  
 Filomat  
 Applied Mathematical Modelling  
 Mathematical Problems in Engineering  
 Mathematical Methods in the Applied Sciences  
 Journal of Inequalities and Applications  
 IEEE Transactions on Pattern Analysis and Machine Intelligence  
 International Journal of Information Technology & Decision Making  
 Intelligent Systems in Accounting, Finance and Management  
 Discrete Dynamics in Nature and Society  
 IMA Journal of Management Mathematics  
 Science China Mathematics  
 Applied Mathematics - A Journal of Chinese Universities  
 Bulletin of the Malaysian Mathematical Sciences Society

## National Competitive Research Grant agencies

Australia: Australian Research Council (ARC): DP, LP, DECRA, NISDRG, FL  
 Canada: National Science and Engineering Research Council (NSERC)  
 Switzerland: National Science Foundation (SNSF)  
 Poland: National Science Centre (NSC)

## External Promotions

UNSW (Sydney, Australia): 2019 (twice)  
 Macquarie University (Sydney, Australia): 2020  
 University of Chinese Academy of Sciences (Beijing, China): 2022

## Scientific committee of conferences

- 2020 – Member of the Advisory Board, One World Actuarial Research Seminar
- 2020 – Conference in Actuarial Science & Finance on Samos (Samos, Greece)
- 2020 Online International Conference in Actuarial science, data science and finance
- 2018 [*Chair*] 22nd International Congress on Insurance: Mathematics and Economics (Sydney, Australia)
- 2013 New York Annual Conference of Asia-Pacific Risk and Insurance Association (APRIA)
- 2012 Seoul Annual Conference of Asia-Pacific Risk and Insurance Association (APRIA)
- 2011 Tokyo Annual Conference of Asia-Pacific Risk and Insurance Association (APRIA)
- 2010 Singapore World Risk and Insurance Economics Congress (WRIEC)
- 2009 Beijing Annual Conference of Asia-Pacific Risk and Insurance Association (APRIA)

## Organising committee of conferences

- 2019 4th Workshop on Risk: modelling, optimization and inference (with applications in Finance, Insurance and Superannuation) (Sydney, Australia)
- 2017 3rd Workshop on Risk: modelling, optimization and inference (with applications in Finance, Insurance and Superannuation) (Sydney, Australia)

## Organising of short events

- 2022 Uncertainty in decision-making: game-theoretic and machine learning approaches  
Speakers: Professor Jose Blanchet (Stanford), Professor Henry Lam (Columbia)  
University of Melbourne, 9 December 2022

## Miscellaneous reviewing activities

- 2012 Skipper Award Committee (APRIA)
- 2009 Skipper Award Committee (APRIA)

## PhD jury

- 2021 Jan. ARAUJO ACUNA, José Carlos, Tempering and seasonality in non-life insurance modeling, University of Lausanne. External examiner.
- 2016 Sep. JIN, Can (Ken), Occupation time problem in some insurance risk models, University of Melbourne. External examiner.
- 2014 Dec. OMIDI-FIROUZI, Hassan, On the design of customized risk measures in insurance, the problem of capital allocation and the theory of fluctuations for Lévy processes, Université de Montréal. Chair.
- 2014 Oct. RAMLI, Siti Norafidah Mohd, Modelling Multivariate Dependence Structures in Insurance and Credit Risk via Copulas, Macquarie University, Macquarie University. External examiner.
- 2014 Aug. SIMARD, Clarence, Modélisation du carnet d'ordres limites et prévision de séries temporelles, Université de Montréal. Chair.
- 2014 Mar. FARD Farzad Alavi, Analysis of Pricing Financial Derivatives Under Regime-Switching Economy, Macquarie University. External examiner.

**Academic visits**

2022 Dec.	School of Risk and Actuarial Studies, UNSW Sydney (Australia)
2021 Jun.	School of Risk and Actuarial Studies, UNSW Sydney (Australia)
2020 Feb.	School of Risk and Actuarial Studies, UNSW Sydney (Australia)
2019 Aug.	Department of Mathematical Science, University of Copenhagen (Denmark)
2019 Jul.	Institut de Science Financière et d'Assurances, Université Lyon 1 (France)
2019 Jun.-Aug.	Department of Actuarial Science, University of Lausanne (Switzerland)
2019 Mar.	Department of Mathematical Science, University of Copenhagen (Denmark)
2019 Jan.-Feb.	Institut de Science Financière et d'Assurances, Université Lyon 1 (France)
2018 Feb.	Department of Analytics & Operations, National University of Singapore (Singapore)
2015 Jan.	School of Risk and Actuarial Studies, University of New South Wales (Australia)
2014 July	Department of Statistics and Actuarial Science, University of Hong Kong
2014 Mar.	School of Risk and Actuarial Studies, University of New South Wales (Australia)
2014 Mar.	Centre for Actuarial Studies, University of Melbourne (Australia)
2012 Dec.	Department of Mathematics and Statistics, Université de Montréal (Canada)
2012 June	Department of Statistics and Actuarial Science, University of Hong Kong
2012 Jan.	School of Economics and Political Science, University of St. Gallen (Switzerland)
2012 Jan.	Department of Operations, University of Lausanne (Switzerland)
2010 Nov.	Department of Insurance and Risk Management, The Wharton School, UPENN (U.S.A.)
2010 Nov.	Institute of Insurance Economics, University of St. Gallen (Switzerland)
2010 June	Department of Management, University of Lausanne (Switzerland)
2009 Dec.	School of Actuarial Studies, Université Laval (Québec City, Canada)
2009 Dec.	Department of Mathematics and Statistics, Université de Montréal (Canada)
2009 Dec.	Department of Statistics and Actuarial Science, University of Waterloo (Canada)
2009 June	Department of Actuarial Science, University of Lausanne (Switzerland)

**Presentations**

## Conference Presentations (invited speaker)

2019 Sep.	<i>Stochastic dependence and general insurance capital: from data to models</i> Plenary Speaker at 6 <sup>th</sup> Workshop on "Recent developments in dependence modelling with applications in finance and insurance" (Agistri, Greece)
2018 Nov.	<i>Modelling insurance claim counts and reporting delays with Cox processes</i> Research School of Finance, Actuarial Studies and Statistics – 2018 Summer Camp. (Bowral, Australia)
2017 Dec.	<i>Modelling insurance claim counts and reporting delays with Cox processes</i> UNSW-MacquarieU Workshop on Risk: Modelling, optimization and inference (Sydney, Australia)
2017 Nov.	<i>Correlations between lines of business - Are they real or illusionary?</i> CAS 2017 Annual Meeting (Anaheim, CA, USA)
2014 July	<i>On optimal periodic dividend strategies in the dual model with diffusion</i> Gerber-Shiu Workshop, University of Hong Kong (Hong Kong)
2011 Nov.	<i>Modelling Dependence in Insurance Claims Processes with Lévy Copulas</i> Advances in Financial Risk Workshop, Macquarie University (Sydney, Australia)
2010 Dec.	<i>Claim dependence modelling with Lévy copulas</i> International Conference in Applied Statistics and Financial Mathematics (Hong Kong)

## Conference Presentations (peer-reviewed submissions)

2023 Sep	<i>Fairness through regularization: an approach to mitigate group disparities for multiple protected features</i> 8 <sup>th</sup> Workshop on "Recent Developments in Dependence Modelling with Applications in Finance, Insurance and Pensions" (Agistri, Greece)
2023 May	<i>Spoilt for Choice: Dealing with Many Categorical Features in Actuarial Machine Learning</i> 2023 International Congress of Actuaries (joint with Greg Taylor, Melantha Wang, and Bernard Wong)
2022 July	<i>Stochastic Ensemble Loss Reserving</i> 25th International Congress on Insurance: Mathematics and Economics (Online) (joint with Yanfeng Li, Bernard Wong, and Alan Xian)



- 2022 July *Optimal reinsurance under terminal value constraints*  
25th International Congress on Insurance: Mathematics and Economics (Online)  
(joint with Hayden Lau and Mogens Steffensen)
- 2022 June *Stochastic Ensemble Loss Reserving*  
2022 Virtual ASTIN/AFIR Colloquium, June 20-24, 2022  
(joint with Yanfeng Li, Bernard Wong, and Alan Xian)
- 2022 June *Optimal reinsurance under terminal value constraints*  
2022 Virtual ASTIN/AFIR Colloquium, June 20-24, 2022  
(joint with Hayden Lau and Mogens Steffensen)
- 2022 May *Harnessing the power of "The Wisdom of Crowds": How do we optimize the ensembling of different loss reserving models?*  
2022 All-Actuaries Summit: Getting closer, Thinking bigger (Australia)  
(joint with Yanfeng Li, Bernard Wong, and Alan Xian)
- 2022 May *An AI-driven Approach to Quantifying Model Error in Loss Reserving Generalised Linear Models*  
2022 All-Actuaries Summit: Getting closer, Thinking bigger (Australia)  
(joint with Greg Taylor, Bernard Wong, and David Yu)
- 2022 May *SPLICE: Synthetic data generation for loss experience*  
2022 All-Actuaries Summit: Getting closer, Thinking bigger (Australia)  
(joint with Greg Taylor, Melantha Wang, and Bernard Wong)
- 2021 May *Neural Networks in Reserving: how and why are they worth considering?*  
2021 All-Actuaries Virtual Summit: Thriving in an Age of Extremes (Australia)  
(joint with M. Al-Mudafer, Greg Taylor, and Bernard Wong)
- 2019 Nov. *When (not) to use abstract dependence structures: theoretical and practical considerations*  
10th Australasian Actuarial Education and Research Symposium (Melbourne, Australia)
- 2019 July *Inference of counts using Markov-modulated non-homogeneous Poisson processes*  
23rd International Congress on Insurance: Mathematics and Economics (Munich, Germany)
- 2019 Apr *A tractable method for unravelling and modelling unobservable or complex dependence drivers (with granular data)*  
IAA Section Colloquium 2019 (Cape Town, South Africa)
- 2018 June *Hybrid strategies in the presence of fixed transaction costs*  
10th Conference in Actuarial Science & Finance on Samos (Samos, Greece)
- 2017 July *Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times*  
21st International Congress on Insurance: Mathematics and Economics (Vienna, Austria))
- 2016 Sep *On the distribution of the excedents of funds with assets and liabilities in presence of solvency and recovery requirements*  
3rd European Actuarial Journal Conference (Lyon, France)
- 2016 May *On the interface between optimal periodic and continuous dividend strategies in the presence of transaction costs*  
9th Conference in Actuarial Science & Finance on Samos (Samos, Greece)
- 2015 Dec *Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations*  
7th Australasian Actuarial Education and Research Symposium (Gold Coast, Australia)
- 2014 July *Claim dependencies in economic capital modeling: The Australian experience*  
49th Actuarial Research Conference (Santa Barbara, USA)
- 2013 July *On optimal periodic dividend strategies in the dual model with diffusion*  
48th Actuarial Research Conference (Philadelphia, USA)
- 2012 Dec. *On a mean reverting dividend strategy with Brownian motion*  
5th Australasian Actuarial Education and Research Symposium (Melbourne, Australia)
- 2012 July *Optimal dividends in a perturbed Cramér-Lundberg model with stochastic prospects and a penalty at ruin*  
4th International Gerber-Shiu Workshop (Melbourne, Australia)
- 2012 June *Optimal dividends in a perturbed Cramér-Lundberg model with stochastic prospects and a penalty at ruin*  
16th International Congress on Insurance: Mathematics and Economics (Hong Kong)
- 2011 Nov. *What is it that makes the Swiss annuitise? A description of the Swiss retirement system*  
2011 Australasian Actuarial Education and Research Symposium (Canberra, Australia)
- 2011 June *Modelling Dependence in Insurance Claims Processes with Lévy Copulas*  
15th International Congress on Insurance: Mathematics and Economics (Trieste, Italy)

- 2011 June *Optimal dividends and capital injections in the dual model with diffusion*  
15th International Congress on Insurance: Mathematics and Economics (Trieste, Italy)
- 2011 June *Modelling Dependence in Insurance Claims Processes with Lévy Copulas*  
Memorable Actuarial Research Conference (Leuven, Belgium)
- 2010 June *On a mean reverting dividend strategy with Brownian motion*  
6th Conference in Actuarial Science & Finance on Samos (Samos, Greece)
- 2009 Sep. *Forced savings and annuitisation with cross-subsidies: a mutation of the beast*  
AFIR Colloquium (Munich, Germany)
- 2009 Sep. *What is it that make the Swiss annuitise? A description of the Swiss retirement system*  
LIFE Colloquium (Munich, Germany)
- 2009 May *On the level of national retirement savings with annuitisation and cross-subsidies: a two-tiered economic model*  
13th International Congress on Insurance: Mathematics and Economics (Istanbul, Turkey)
- 2009 May *What is it that make the Swiss annuitise? A description of the Swiss retirement system*  
13th International Congress on Insurance: Mathematics and Economics (Istanbul, Turkey)
- 2008 Oct. *On Optimal Dividend Strategies: Review and Dual Model*  
UNSW Actuarial Studies Research Symposium 2008 (Sydney, Australia)
- 2008 Jul. *A Review of Modern Collective Risk Theory with Dividend Strategies*  
12th International Congress on Insurance: Mathematics and Economics (Dalian, China)
- 2007 Jul. *Optimal dividends in the dual model with diffusion*  
11th International Congress on Insurance: Mathematics and Economics (Piraeus, Greece)
- 2006 Jul. *Optimal dividends in the dual model*  
10th International Congress on Insurance: Mathematics and Economics (Leuven, Belgium)
- 2006 May *Demand Estimation Through Credibility Theory*  
17th Annual Conference of POMS (Boston, USA)

#### Academic Seminars

- 2023 Sep *Fairness through regularization: an approach to mitigate group disparities for multiple protected features*  
Bayes Business School Seminars (London, UK)
- 2022 Dec *On the mitigation of unwanted discrimination of multiple protected features via distance covariance regularisation*  
2022 UNSW Workshop on Risk and Actuarial Frontiers (Sydney, Australia)
- 2022 Jun *Ensemble distributional forecasting for insurance loss reserving*  
One World Actuarial Research Seminar
- 2022 Mar *Optimal reinsurance under terminal value constraints*  
Department of Econometrics and Business Statistics, Monash Business School, Melbourne (Australia)
- 2021 Nov *Optimal reinsurance under terminal value constraints*  
School of Risk and Actuarial Studies, UNSW Sydney (Australia)
- 2019 Jul *A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Reserving*  
Séminaires  $L^2$  Lyon-Lausanne (ISFA, Lyon)
- 2019 Jun *Stochastic dependence and general insurance capital: from data to models*  
Centre of Actuarial Studies, Department of Economics, University of Melbourne (Australia)
- 2019 Mar *Inference and prediction of counts using Markov-modulated non-homogeneous Poisson processes*  
Department of Mathematical Science, University of Copenhagen (Denmark)
- 2019 Feb *Inference and prediction of counts using Markov-modulated non-homogeneous Poisson processes*  
Séminaire Labo, Institut de Science Financière et d'Assurances, Université Lyon 1 (France)
- 2016 Aug *On the distribution of the profits of assets-liability funds in presence of regulation*  
Macquarie University Actuarial Studies Seminar, Macquarie University (Sydney, Australia)
- 2015 Dec *Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations*  
School of Risk & Actuarial Studies Research Day 2015 (Sydney, Australia)
- 2015 Apr. *Dépendance et assurance: une histoire de corrélation?*  
Club Mathématique de l'Université de Montréal, Montreal (Canada)
- 2015 Jan. *Actuarial applications of Lévy copulas*  
Actuarial and Financial Mathematics Seminar, Quantact Lab, Center for Research in Mathematics (CRM), Montreal (Canada)

- 2014 Mar. *On optimal periodic dividend strategies in the dual model with diffusion*  
Centre for Actuarial Studies, University of Melbourne (Australia)
- 2012 Dec. *Dividendes et injections de capital dans le modèle dual : Stratégies optimales*  
Séminaires du Centre de Recherche en Mathématiques, Université de Montréal (Canada)
- 2010 Nov. *An Analysis of Private Pensions in Switzerland, A Country Where People Choose to Save and then Annuitize*  
Rosen-Huebner-McCahan Seminar, The Wharton School, UPENN (Philadelphia, U.S.A.)
- 2010 Nov. *Forced savings and annuitisation: an international perspective*  
University of St. Gallen (Switzerland)
- 2010 Apr. *On a mean reverting dividend strategy with Brownian motion*  
UNSW Actuarial Studies Research Seminar (Sydney, Australia)
- 2009 Dec. *On a mean reverting dividend strategy with Brownian motion*  
Séminaires du Centre de Recherche en Mathématiques, Université de Montréal (Canada)
- 2009 Dec. *On a mean reverting dividend strategy with Brownian motion*  
Université Laval (Québec, Canada)
- 2009 Dec. *Forced savings and annuitisation with cross-subsidies: a mutation of the beast*  
Department of Statistics and Actuarial Science Seminars, University of Waterloo (Canada)
- 2009 Dec. *On a mean reverting dividend strategy with Brownian motion*  
Department of Statistics and Actuarial Science Seminars, University of Waterloo (Canada)
- 2009 Mar. *The demand for retirement annuities and non-mandatory superannuation savings: the case of Switzerland*  
Macquarie University Actuarial Studies Seminar, Macquarie University (Sydney, Australia)
- 2009 Jan. *The demand for retirement annuities and non-mandatory superannuation savings: the case of Switzerland*  
International Research Workshop (UNSW, Sydney, Australia)
- 2008 Feb. *Optimal dividends in the dual model with diffusion*  
UNSW Actuarial Studies Research Seminar (Sydney, Australia)
- 2006 Dec. *Optimal Dividends in the Dual Model*  
Séminaires  $L^2$  Lyon-Lausanne (ISFA, Lyon)

## Other attended conferences

- 2022 Nov. 2022 Australasian Actuarial Education and Research Symposium (Canberra, Australia)
- 2019 Mar. Workshop "Fair Valuation in Insurance" (Brussels, Belgium)
- 2016 Jun. CAS Course on Professionalism (Toronto, Canada)
- 2015 Jun. Enterprise Risk Management Symposium (Washington, USA)
- 2015 Jun. The Changing Face of GI, Actuaries Institute (Sydney, Australia)
- 2014 July 16th International Congress on Insurance: Mathematics and Economics (Shanghai, China)
- 2010 Nov. OECD/IOPS Global Forum on Private Pensions, on invitation (Sydney, Australia)
- 2010 Sep. 6th International Longevity Risk and Capital Markets Solutions Conference (Sydney, Australia)
- 2010 Jul. 18th Australian Colloquium of Superannuation Researchers, *Retirement Saving Choices: challenges for individuals, industry and public policy* (Sydney, Australia)
- 2009 Jul. 17th Australian Colloquium of Superannuation Researchers, *Celebrating 100 years of a National Retirement Income System - The Challenges Ahead* (Sydney, Australia)
- 2009 Jun. 2b) or not 2b) Conference (Lausanne, Switzerland)
- 2008 Nov. 1st Australasian Actuarial Education and Research Symposium (Sydney, Australia)

**TEACHING****Awards**

- 2016 2015 School of Risk and Actuarial Studies Teaching Innovation Award, for “Use of Learning Catalytics in the Actuarial Program”
- 2011 Nominated for a 2012 Vice-Chancellor Award for Teaching Excellence
- 2011 Australian School of Business Teaching Excellence Award, for “Outstanding Technology-Enabled Teaching Innovation”

**Education**

- 2017 ‘Presenting online’ (one day), Australia’s National Institute of Dramatic Art (NIDA)
- 2017 ‘Public Speaking Bootcamp’ (one day), Australia’s National Institute of Dramatic Art (NIDA)
- 2009 FULT ‘Foundations of University Learning and Teaching’ (five days), University of New South Wales

**Courses taught**

- 2023 S2 ACTL 90021 Topics in Insurance and Finance (M.Sc., University of Melbourne)
- 2023 S2 ACTL 20004 Topics in Actuarial Studies (B.Sc., University of Melbourne)
- 2023 S1 ACTL 90020 General Insurance Modelling (M.Sc., University of Melbourne)
- 2023 S1 ACTL 30007 Actuarial Modelling III (B.Sc., University of Melbourne)
- 2022 S1 ACTL 90020 General Insurance Modelling (M.Sc., University of Melbourne)
- 2022 S1 ACTL 30007 Actuarial Modelling III (B.Sc., University of Melbourne)
- 2021 S2 ACTL 10001 Introduction to Actuarial Studies (B.Sc., University of Melbourne)
- 2021 S1 ACTL 90020 General Insurance Modelling (M.Sc., University of Melbourne)
- 2021 S1 ACTL 30007 Actuarial Modelling III (B.Sc., University of Melbourne)
- 2020 S2 ACTL 10001 Introduction to Actuarial Studies (B.Sc., University of Melbourne)
- 2020 S1 ACTL 90020 General Insurance Modelling (M.Sc., University of Melbourne)
- 2020 S1 ACTL 30007 Actuarial Modelling III (B.Sc., University of Melbourne)
- 2019 T6 ZZBU 6507 Data Visualisation & Communication – developed but not delivered (fully online, Master of Analytics, UNSW)
- 2019 T3 ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)
- 2019 Jul Actuarial Journals and the Publishing Process (PhD, University of Lyon 1)
- 2018 S2 ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)
- 2018 S1 ACTL 4003/5003 Research Methods in Actuarial Science (Honours and HDR, UNSW)
- 2017 S2 ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)
- 2017 S2 ACTL 4003/5003 Research Methods in Actuarial Science (Honours and HDR, UNSW)
- 2016 S2 ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)
- 2016 S1 ACTL 3141 Actuarial Statistics (B.Sc., UNSW)
- 2015 S2 ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
- 2015 S2 ACTL 3162 Insurance Risk Models (B.Sc., UNSW)
- 2014 Fall ACT3284 Modèles en assurances IARD (B.Sc., Université de Montréal)
- 2014 Fall ACT3241 Théorie du Risque (B.Sc., Université de Montréal)
- 2013 S2 ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
- 2013 S2 ACTL 3003 Insurance Risk Models (B.Sc., UNSW)
- 2013 S1 ACTL 5104 Actuarial Statistics (M.Sc., UNSW)
- 2013 S1 ACTL 3001 Actuarial Statistics (B.Sc., UNSW)
- 2012 S2 ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
- 2012 S2 ACTL 3003 Insurance Risk Models (B.Sc., UNSW)
- 2011 S2 ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
- 2011 S2 ACTL 3003 Insurance Risk Models (B.Sc., UNSW)
- 2011 S1 ACTL 5102 Financial Mathematics (M.Sc., UNSW)
- 2011 S1 ACTL 2001 Financial Mathematics (B.Sc., UNSW)
- 2010 SS ACTL 5102 Financial Mathematics (M.Sc., UNSW)
- 2010 SS ACTL 2001 Financial Mathematics (B.Sc., UNSW)
- 2010 S1 ACTL 5102 Financial Mathematics (M.Sc., UNSW)
- 2010 S1 ACTL 2001 Financial Mathematics (B.Sc., UNSW)
- 2009 S2 ACTL 4003/5003 Research Topics in Actuarial Science (Honours and HDR, UNSW)
- 2009 S2 ACTL 5106 Insurance Risk Models (M.Sc., UNSW)

2009	S1	ACTL 5102 Financial Mathematics (M.Sc., UNSW)
2009	S1	ACTL 2001 Financial Mathematics (B.Sc., UNSW)
2008	S2	ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
2008	S1	Gestion des opérations (B.Sc., University of Lausanne)
2007	S2	Credibility Theory (M.Sc., University of Lausanne)
2007	S1	Gestion des opérations (B.Sc., University of Lausanne)
2005	S2	Laboratory of selected topics in actuarial mathematics (M.Sc., University of Lausanne)
2005	S1	Mathematics of Lead Time (MAS, Bordeaux Business School)

## Masters project supervision (ACTL5004)

2016	Ka Wai (Hayden) Lau (UNSW) Now PhD student at UNSW.
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## Summer Research Scholarships

2019-2020	Melantha (Chenyi) Wang (UNSW)
2019-2020	Simon (Wanzhang) Jing (UNSW)
2018-2019	Wilson Cheng (UNSW)
2016-2017	Guanting Liu (UNSW)
2016-2017	Edward Djizmedjian (UNSW)

## INTERNAL ENGAGEMENT AND LEADERSHIP

### Awards

- 2018      **The Dean's Distinguished Leadership Award**, in recognition of exceptional and sustained contributions to the achievement of the goals of the UNSW School of Business and Strategy 2025.
- This award may be given to an individual member of staff who, over a sustained period, has provided meritorious and distinguished leadership that has significantly exceeded the scope and commitment of usual expectations in achieving Business School goals.

### Academic engagement and leadership

- 2021 – 2022      Elected Member, Teaching and Learning Quality Assurance Committee (TALQAC), The University of Melbourne  
                          – Program review panel member (2021: 1, 2022: 1)  
                          – Program review panel chair (2023: 1)  
                          – Member, *Working group on diversifying evidence of teaching effectiveness* (2022-2023)
- 2020 –            Member, Academic Board, The University of Melbourne  
                          – Appeals committee member (2020: 1)
- 2019 – 2019      Elected member, Faculty Board, UNSW Business School, UNSW  
                          (representing the Faculty Academic Staff)
- 2019 – 2019      Member, School of Risk and Actuarial Studies Research Committee, UNSW
- 2017 – 2018      Chair, UNSW Business School 3+ Reference Group
- 2017 – 2018      Member, UNSW 3+ Transition Advisory Group
- 2017 – 2018      Member, UNSW 3+ Engagement Reference Group
- 2017 – 2018      Elected member, Faculty Board, UNSW Business School, UNSW  
                          (representing the School of Risk and Actuarial Studies)
- 2016 – 2017      Chair, Alternative Delivery Modes Committee, School of Risk and Actuarial Studies, UNSW
- 2015 – 2017      Associate Head of School, School of Risk and Actuarial Studies, UNSW
- 2015 – 2017      Chair, Learning & Teaching Committee, School of Risk and Actuarial Studies, UNSW
- 2015 – 2017      Member, Faculty Education Committee, UNSW Business School, UNSW
- 2015 – 2017      Member, School Industry Advisory Board, School of Risk and Actuarial Studies, UNSW
- 2017 – 2017      Member, Education Focussed roles selection committee, UNSW Business School
- 2015 – 2016      Member, Faculty Board, UNSW Business School, UNSW
- 2014 – 2015      Chair, website committee, Departement of Mathematics and Statistics, UdeM
- 2014 – 2015      Member, 'internationalisation' committee, Departement of Mathematics and Statistics, UdeM
- 2012 – 2013      Elected chair of the *School Plenum*, School of Risk and Actuarial Studies, UNSW
- 2012 – 2013      Elected member of the *School Advisory Board*, School of Risk and Actuarial Studies, UNSW
- 2012 – 2013      Postgraduate Research Coordinator, School of Risk and Actuarial Studies, UNSW
- 2012 – 2013      Honours Coordinator, School of Risk and Actuarial Studies, UNSW
- 2012 – 2013      Member, *Australian School of Business Promotions Committee for Promotion to Senior Lecturer*, UNSW
- 2009 – 2012      Academic representative, *Australian School of Business E-learning Committee*, UNSW
- 2009 – 2012      Director, Actuarial Studies Co-op Program of the UNSW
- 2011 – 2011      Member, *ASB Linkage Grant Working Party*, UNSW
- 2010 – 2010      Member, *Australian School of Business Standing Committee*, UNSW
- 2007 – 2008      Elected member, Commission of the University of Lausanne Personnel (official legal representative of all (administrative and academic) staff employed by the university)
- 2006 – 2008      Elected member, Faculty Council, Faculty of Business and Economics of the University of Lausanne
- 2006 – 2008      Treasurer, *Association du Corps Intermédiaire et des Doctorants de l'Université de Lausanne* (official representative of the regular (teaching and research) staff that is below the professor level)
- 2006 – 2008      Member, Committee *Enseignement* (teaching) of the University of Lausanne
- 2006 – 2008      Member, Committee *Recherche* (research) of the University of Lausanne

## Teaching leadership

### Seminars and presentations

- 2022 (2 February) Yellowdig presenter, *WCLA PD: Student Engagement Pilot Projects of 2021 (Piazza & YellowDig)*
- 2020 (14 September) Panelist, *WCLA Symposium: Adapting to Radical Disruptions in Business Education*
- 2018 (February) [Digital Uplift interview](#), Business Digital Learning (UNSW Business School, UNSW).
- 2017 (October, 18) *ACTL1101 Digital Uplift*, School of Risk and Actuarial Studies Digital Uplift Planning (UNSW Business School, UNSW).
- 2016 (February, 25) *Assessment Good Practice*, School of Risk and Actuarial Studies Learning & Teaching Workshop (UNSW Business School, UNSW).
- 2015 (November, 3) *Spotlight on Program Learning Goals in the School of Risk and Actuarial*, UNSW Business School – Academic's eLearning Showcase & Workshop (UNSW Business School, UNSW).
- 2014 (December, 5) Seminar on the flipped classroom to the FOLIUM team (teaching support) of the University of Montreal as well as some flipped classroom pilot project leaders, University of Montréal, Canada
- 2014 (October, 1) Seminar on how and when to use technology (in particular, tablet PCs and recorded videos) for teaching technical subjects, made to interested members of the Department of Mathematics and Statistics, University of Montréal, Canada
- 2014 (September, 8) Brief presentation on how and when to use technology (in particular, tablet PCs and recorded videos) for teaching technical subjects, made to the Department Assembly, Department of Mathematics and Statistics, University of Montréal, Canada
- 2014 (May, 23) Presentation on how and when to use technology (in particular, tablet PCs and recorded videos) for teaching technical subjects, made to the steering committee of the project *Mathéma-TIC*, Montréal, Canada
- 2013 (August, 16) Member, *Large Class Teaching Panel*, Fundamentals of University Learning and Teaching (FULT), Learning & Teaching @ UNSW
- 2012 (June, 21) Member, *Large Class Teaching Panel*, Fundamentals of University Learning and Teaching (FULT), Learning & Teaching @ UNSW
- 2012 (April, 3) *Low-tech high-impact teaching strategies for large classes*, Connections in Learning and Teaching (Learning & Teaching @ UNSW)
- 2011 (November, 8) *Using videos in teaching: when and how?*, ASB Academics' Showcase of Technology in Teaching (ASB, UNSW)
- 2011 (February, 17) Member, *Large Class Teaching Panel*, Fundamentals of University Learning and Teaching (FULT), Learning & Teaching @ UNSW
- 2010 (March, 1) *Australian School of Business Strategic Retreat*, invited for the eLearning component
- 2010 (August, 26) Member, *Large Class Teaching Panel*, Fundamentals of University Learning and Teaching (FULT), Learning & Teaching @ UNSW
- 2009 (November, 19) Member, *Large Class Teaching Panel*, Fundamentals of University Learning and Teaching (FULT), Learning & Teaching @ UNSW
- 2009 (November, 18) Recorded interview by Colina Mason (Learning & Teaching @ UNSW) for the sessional staff gateway resource
- 2009 (August, 28) School of Accounting seminar (UNSW), *Digital Tablets and Screen Recording*
- 2009 (July, 8) ASB Workshop (UNSW), *Digital Tablets and Screen Recording*

### Other

- 2016 S1 *FULT peer observation* participant: interested FULT participants can come and observe in my lectures, as well as access the course website.

## Other

### Formal Mentorship/Coaching

- 2022 – PhD student at the University of Bayreuth, CoMento Program
- 2020 – University of Melbourne academic advising program (about 20 undergraduate students per year)
- 2020 – 2020 University of Melbourne level C
- 2019 – 2019 UNSW Business School PhD Fellow
- 2017 – 2017 1 UNSW Scientia Scholar
- 2016 – 2016 1 UNSW Scientia Scholar
- 2015 – 2016 1 ECR academic from UNSW Business School



ECR development (external)

- 2023 – 2023     Guest lecture on how to be a good reviewer (from an Editor's perspective)  
                     MQBS Meet the Academic Seminar Series - Session 5: How to become a good reviewer...  
                     Macquarie Business School PhD Students, Sydney, Australia (via Zoom)
- 2022 – 2022     Guest lecture on Research assessment, Actuarial research, and the Publication process  
                     ISFA PhD students, Université Bernard, Lyon, France (via Zoom)
- 2019 – 2019     Guest lecture on Research assessment, Actuarial research, and the Publication process  
                     ISFA PhD students, Université Bernard, Lyon, France (in person)

## EXTERNAL ENGAGEMENT AND LEADERSHIP

### Professional appointments (selected)

2023 – 2026	Non-Executive Director, Management Board of the Theatre Royal (Hobart, Tasmania).
2021 – 2022	Elected Councillor, Caulfield Junior College Convenor, Policy Review and Development Subcommittee
2020 – 2022	Elected Board Member, École Française Melbourne (EFM) Vice-President since 2021
2018 – 2019	Non-Executive Director, Lycee Condorcet the International French School of Sydney
2014 – 2015	Actuarial consulting, Service de consultation en actuariat (Université de Montréal)
2008 – 2012	Non-Executive Director, <i>Fondation Comoedia</i> , Switzerland (group insurance)
2007 – 2008	Founder, Executive Director, <i>Fondation Comoedia</i> , Switzerland (group insurance)
2006 – 2008	Executive Director, Chair, <i>Fondation de prévoyance Artes et Comoedia</i> , Switzerland (pension fund, 200 employers, 2000 insured)
2004 – 2004	Consultant, <i>La Suisse Assurances</i> (actuarial department for group life), Lausanne, Switzerland

### Professional affiliations

2018 –	Member, Australian Institute of Company Directors (AICD)
2014 –	Academic Member, Casualty Actuarial Society (CAS)
2008 –	Affiliate member, Actuaries Institute of Australia <sup>6</sup>
2007 –	Member, Swiss Association of Actuaries (full member of IAA)
2009 –	Member, Actuarial Studies in Non-Life Insurance section of IAA (ASTIN)
2008 –	Member, American Risk and Insurance Association (ARIA)
2008 – 2011	Member, Asia-Pacific Risk and Insurance Association (APRIA)

### Professional service

2014 –	Member, CAS Academic Central
2009 – 2016	Member, Hachemeister and Michelbacher prizes committee (CAS)
2014 – 2016	Member, Data and Technology Working Party (CAS)

### In the media

Professional websites and blogs

- 2021 1. Chen, J., [Virtual Summit Shorts: Neural networks in reserving – how and why are they worth considering?](#)  
Actuaries Digital, 9 June 2021. (Sydney, Australia)

BusinessThink

- 2019 1. [A smarter approach to analysis refines insurance predictions](#)  
11 October 2019
- 2015 2. [Are insurance companies holding too much capital?](#)  
16 December 2015

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<sup>6</sup>Inactive in 2013 and 2014.

**Other non academic publications**

- 2020 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.  
[\*SynthETIC: A simulator of Synthetic Experience Tracking Insurance Claims\*](#)  
Kasa AI Blog, 14 September 2020.
- 2019 2. **Avanzi, B.**, Taylor, G., Wong, B., Xian, A.  
[\*How to proxy the unmodellable\*](#)  
Actuaries Digital, The Magazine of the Actuaries Institute, April 2019. (Sydney, Australia).
- 2016 3. **Avanzi, B.**, Taylor, G., Wong, B.  
[\*Construction of detailed correlation structures across GI business segments\*](#)  
Actuaries Digital, The Magazine of the Actuaries Institute, 14 December 2016. (Sydney, Australia).
- 2015 4. **Avanzi, B.**, Taylor, G., Wong, B.  
[\*Are correlations real or imagined?\*](#)  
Actuaries Digital, The Magazine of the Actuaries Institute, 30 September 2015. (Sydney, Australia).
- 2014 5. **Avanzi, B.**, Taylor, G., Wong, B.  
[\*Research into claim dependencies: an industry and academic collaboration\*](#)  
Actuaries, The Magazine of the Actuaries Institute, August issue, pp. 9–11. (Sydney, Australia).

**Industry reports**

- 2016 1. Bothwell, P. T., Kannon M. J., **Avanzi, B.**, Izzo, J. M., Knobloch, S. A., Nichols, R. S., Norris, J. L., Pan, Y., Semenovich, D., Spadola, T. A., Waite, L. M., Yarnell, D. H.  
[\*Data & Technology Working Party Report\*](#)  
Casualty Actuarial Society Forum, Fall 2016.
- 2015 2. **Avanzi, B.**, Gagné, C.  
[\*Adjustment of CIA Mortality\*](#)  
Report commissioned by Morneau Shepell (Montréal, Canada).

**Industry presentations**

- 2017 Sep. [\*Recent outlier detection methods with illustrations in loss reserving\*](#)  
'Insights' session of the Actuaries Institute (Sydney, Australia)
- 2016 Nov. [\*On the Impact, Detection and Treatment of Outliers in Robust Loss Reserving\*](#)  
Actuaries Institute 'General Insurance Seminar' (Melbourne, Australia)
- 2016 Oct. [\*Construction of detailed correlation structures across GI business segments\*](#)  
'Insights' session of the Actuaries Institute (Sydney, Australia)
- 2016 Sep. Non-life stream presentation of the 'Insurance Risk and Capital' network workshop on *Recent advances and open problems in Insurance Risk and Capital regulation*
- 2016 Apr. [\*Diversification in Insurance: A Capital Question\*](#)  
Learn@Lunch (Sydney, Australia)
- 2016 Apr. [\*Beyond Correlation: Recent Developments in Modelling Claims Dependencies\*](#)  
'Insights' session of the Actuaries Institute (Sydney, Australia)
- 2015 Oct. [\*Correlations between insurance lines of business: Illusion or phenomenon?\*](#)  
'Insights' session of the Actuaries Institute (Sydney, Australia)

**Other presentations**

- 2021 Oct. Invited Speaker, 2021 Contact-less Night by Actuarial Students' Society

**Events**

- 2016 Organiser, 'Insurance Risk and Capital' network workshop on *Recent advances and open problems in Insurance Risk and Capital regulation*, with Professor Shaun Wang (NTU Singapore) and Robert Thomson (Head of Actuarial services, Australian Prudential Regulation Authority).

**Miscellaneous written contributions**

- 2019 Jan. *Welcome to new students*  
Finity Actuarial Bulletin
- 2018 Jan. *Welcome to new students*  
Finity Actuarial Bulletin
- 2016 Jan. *Welcome to new students*  
Finity Actuarial Bulletin no 77