# Curriculum Vitae
## BENJAMIN AVANZI

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| 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 |
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| Date of CV: | August 2022 |

## Education

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|---|---|---|
| 2008 | Ph.D. | University of Lausanne, Faculty of Business and Economics (HEC Lausanne), Actuarial Science (supervisor: Prof. Hans U. Gerber) |
| 2005 | Lic. | University of Lausanne, Faculty of Business and Economics (HEC Lausanne), Business, major in Actuarial Science |
| | CAS | *Casualty Actuarial Society* exams: 1, 2, 3F, 4, 5, C1, C2, S, VE, VF, COP |
| | SOA | *Society of Actuaries* associateship exams: 3 VEEs, P, FM, M (MLC & MFE), C, APC |
| | | *Society of Actuaries* fellowship exams: GIINT, GIRR |

## Academic appointments

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|---|---|
| 2020 – | Professor 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[1], Département de Mathématiques et de Statistique |
| | Faculté des Arts et des Sciences, Université de Montréal (UdeM), Canada |
| 2013 – 2015 | Professeur agrégé en actuariat[2], 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[3], 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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[1] 'Adjunct Professor' of Actuarial Science
[2] 'Associate Professor' of Actuarial Science
[3] 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[4]**

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**

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|---|---|
| 2018 | **Taylor Fry General Insurance Seminar Silver Prize**, awarded by an independent panel for the paper *How to proxy the unmodellable: Analysing granular insurance claims in the presence of unobservable or complex drivers* (Australian Actuaries Institute General Insurance Seminar, November 2018) |
| 2017 | **Hachemeister Prize**, awarded by the Casualty Actuarial Society (CAS) for the paper *Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations* (2016, ASTIN Bulletin, 46:2) |

**Publications**

Metrics (as of August 2022)

Google Scholar: 1168 citations, $h$-index of 16 (since 2017: 683 citations, $h$-index of 14)
Scopus profile: 639 citations, $h$-index of 11
ResearchGate: RG Score of 23.99 (80 %ile), Research Interest of 567.7 (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

| | | |
|---|---|---|
| 2022 | 1. | **Avanzi, B.**, Li, Y., Wong, B., Xian, A. *Ensemble distributional forecasting for insurance loss reserving* Submitted |
| 2022 | 2. | **Avanzi, B.**, Lau, H., Steffensen, M. *Optimal reinsurance under terminal value constraints* Submitted |

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[4]See, e.g., https://rms.arc.gov.au/RMS/Proposal/Reference/For20Codes.

2022    3. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.
            *Detection and treatment of outliers for multivariate robust loss reserving*
            Submitted

2022    4. **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.
            *On the impact of outliers in loss reserving*
            Submitted

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.*

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*
            [Q1,A][5] Scandinavian Actuarial Journal, in press

2022    6. **Avanzi, B.**, Taylor, G., Wang, M.
            *SPLICE: A Synthetic Paid Loss and Incurred Cost Experience Simulator*
            [Q2,A] Annals of Actuarial Science (Actuarial Software), in press

2022    7. Al-Mudafer, M. T., **Avanzi, B.**, Taylor, G., Wong, B.
            *Stochastic loss reserving with mixture density neural networks*
            [Q1,A*] Insurance: Mathematics and Economics, Vol. 105, pp. 144–174

2021    8. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.
            *SynthETIC: an individual insurance claim simulator with feature control*
            [Q1,A*] Insurance: Mathematics and Economics, Vol. 100, pp. 296–308

2021    9. **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   10. **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

2021   11. **Avanzi, B.**, Taylor, G., Wong, B., Yang, X.
            *On the modelling of multivariate counts with Cox processes and dependent shot noise intensities*
            [Q1,A*] Insurance: Mathematics and Economics, Vol. 99, pp. 9–24

2021   12. **Avanzi, B.**, Lau, H.., Wong, B.
            *Optimal Periodic Dividend Strategies for Spectrally Negative Lévy Risk Processes With Fixed Transaction Costs*
            [Q2,A] Scandinavian Actuarial Journal, Vol. 2021, Issue 8, pp. 645–670

2021   13. **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   14. **Avanzi, B.**, Taylor, B., Vu, P. A., Wong, B.
            *On Unbalanced Data and Common Shock Models in Stochastic Loss Reserving*
            [Q2,A] Annals of Actuarial Science, Vol. 15, Issue 1, pp. 173–203

2020   15. **Avanzi, B.**, Lau, H.., Wong, B.
            *Optimal Periodic Dividend Strategies for Spectrally Positive Lévy Risk Processes With Fixed Transaction Costs*
            [Q1,A*] Insurance: Mathematics and Economics, Vol. 93, pp. 315–332

2020   16. **Avanzi, B.**, Taylor, B., Vu P. A., Wong, B.
            *A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Reserving*
            [Q1,A*] Insurance: Mathematics and Economics, Vol. 93, pp. 50–71

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[5][Quartile according to Scimago 2021, Journal rank according to the latest ABDC 2019 list]

2018    17.   **Avanzi, B.**, Taylor, B., Wong, B.
              *Common shock models for claim arrays*
              [Q1,A] ASTIN Bulletin, Vol. 48, Issue 3, pp. 1109-1136

2018    18.   **Avanzi, B.**, Tu, V., Wong, B.
              *Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 79, pp. 225-242

2018    19.   **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] ASTIN Bulletin, Vol. 48, Issue 2, pp. 647–672.

2017    20.   **Avanzi, B.**, Pérez, J.-L., Wong, B., Yamazaki, K.
              *On optimal joint reflective and refractive dividend strategies in spectrally positive Lévy models*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 72, pp. 148–162.

2016    21.   **Avanzi, B.**, Taylor, G., Vu, P. A., Wong, B.
              *Stochastic Loss Reserving with Dependence: A Flexible Multivariate Tweedie Approach*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 71, pp. 63–78.

2016    22.   **Avanzi, B.**, Tu, V., Wong, B.
              *On the interface between optimal periodic and continuous dividend strategies in the presence of transaction costs*
              [Q1,A] ASTIN Bulletin, Vol. 46, Issue 3, pp. 709–746.

2016    23.   **Avanzi, B.**, Wong, B., Yang, X.
              *A micro-level claim count model with overdispersion and reporting delays*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 71, pp. 1–14.

2016    24.   **Avanzi, B.**, Taylor, G., Wong, B.
              *Correlations between insurance lines of business: An illusion or a real phenomenon? Some methodological considerations*
              [Q1,A] ASTIN Bulletin, Vol. 46, Issue 2, pp. 225–263.

2016    25.   **Avanzi, B.**, Tao, J., Wong, B., Yang, X.
              *Capturing Non-Exchangeable Dependence in Multivariate Loss Processes with Nested Archimedean Lévy Copulas*
              [Q2,A] Annals of Actuarial Science, Vol. 10, Issue 01, pp. 87–117.

2016    26.   **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    27.   **Avanzi, B.**, Tu, V., Wong, B.
              *On optimal periodic dividend strategies in the dual model with diffusion*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 55, pp. 210–224.

2014    28.   de Treville, S., Schürhoff, N., Trigeorgis, L., **Avanzi, B.**
              *Optimal Sourcing and Lead-Time Reduction under Evolutionary Demand Risk*
              [Q1,A*,FT50] Production and Operations Management, Vol. 23, Issue 12, pp. 2103–2117.

2014    29.   **Avanzi, B.**, Purcal, S.
              *Annuitisation and cross-subsidies in a two-tiered retirement saving system*
              [Q2,A] Annals of Actuarial Science, Vol. 8, Part 2, pp. 234–252.

2013    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*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 52, Issue 1, pp. 98–113.

2013    31.   **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    32.   **Avanzi, B.**, Wong, B.
              *On a mean reverting dividend strategy with Brownian motion*
              [Q1,A*] Insurance: Mathematics and Economics, Vol. 51, Issue 2, pp. 229–238.

2011 33. **Avanzi, B.**, Shen, J., Wong, B.
*Optimal dividends and capital injections in the dual model with diffusion*
[Q1,A] <u>ASTIN Bulletin</u>, Vol. 41, Issue 2, pp. 611–644.

2011 34. **Avanzi, B.**, Cassar, L. C., Wong, B.
*Modelling Dependence in Insurance Claims Processes with Lévy Copulas*
[Q1,A] <u>ASTIN Bulletin</u>, Vol. 41, Issue 2, pp. 575–609.

2010 35. **Avanzi, B.**
*What is it that makes the Swiss annuitise? A description of the Swiss retirement system*
[n/a,n/a] <u>Australian Actuarial Journal</u>, Vol. 16, Issue 2, pp. 135–162.

2009 36. **Avanzi, B.**
*Strategies for Dividend Distribution: A Review*
[Q2,A] <u>North American Actuarial Journal</u>, Vol. 13, Issue 2, pp. 217–251.

2008 37. de Treville, S., Edelson, N. M., Kharkar, A. N., **Avanzi, B.**
*Constructing useful theory: The case of Six Sigma*
[Q1,C] <u>Operations Management Research</u>, Vol. 1, Issue 1, pp. 15–23.

2008 38. **Avanzi, B.**, Gerber, H. U.
*Optimal dividends in the dual model with diffusion*
[Q1,A] <u>ASTIN Bulletin</u>, Vol. 38, Issue 2, pp. 653–667.

2007 39. **Avanzi, B.**, Gerber, H. U., Shiu, E. S. W.
*Optimal dividends in the dual model*
[Q1,A*] <u>Insurance: Mathematics and Economics</u>, 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 <u>2018 General Insurance Seminar</u> (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 <u>2016 General Insurance Seminar</u> (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 Treville, S.
*Demand Estimation Through Credibility Theory*
17th Annual Conference of POMS (Boston, U.S.A.)

2005 5. de Treville, 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 Treville, 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)

2022    1.  **Avanzi, B.**, Kusch Falden, D., Steffensen, M.
            *Stable dividends are optimal under linear-quadratic optimization*
            arXiv

2022    2.  **Avanzi, B.**, Li, Y., Wong, B., Xian, A.
            *Ensemble distributional forecasting for insurance loss reserving*
            arXiv stat.ME 2206.08541

2022    3.  **Avanzi, B.**, Lau, H., Steffensen, M.
            *Optimal reinsurance under terminal value constraints*
            arXiv math.OC 2203.16108

2022    4.  **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    5.  **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.
            *Detection and treatment of outliers for multivariate robust loss reserving*
            arXiv stat.ME 2203.03874

2022    6.  **Avanzi, B.**, Lavender, M., Taylor, G., Wong, B.
            *On the impact of outliers in loss reserving*
            arXiv stat.ME 2203.00184

2021    7.  **Avanzi, B.**, Taylor, G., Wang, M.
            *SPLICE: A Synthetic Paid Loss and Incurred Cost Experience Simulator*
            arXiv Qfin.RM 2109.04058

2021    8.  Al-Mudafer, M. T., **Avanzi, B.**, Taylor, G., Wong, B.
            *Stochastic loss reserving with mixture density neural networks*
            arXiv stat.ME 2108.07924

2020    9.  **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.
            *SynthETIC: an individual insurance claim simulator with feature control*
            arXiv Qfin.RM 2008.05693

2020    10. **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    11. **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   12. **Avanzi, B.**, Taylor, B., Vu P. A., Wong, B.
       *A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Re-*
       *serving*
       UNSW Business School Research Paper No. 2019ACTL03

2019   13. **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   14. **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   15. **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   16. **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   17. **Avanzi, B.**, Tu, V., Wong, B.
       *Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times*
       UNSW Business School Research Paper No. 2017ACTL02

2016   18. **Avanzi, B.**, Taylor, B., Wong, B.
       *Common shock models for claim arrays*
       UNSW Business School Research Paper No. 2016ACTL07

2016   19. **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   20. **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   21. **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   22. **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   23. **Avanzi, B.**, Tu, V., Wong, B.
       *A note on realistic dividends in actuarial surplus models*
       UNSW Business School Research Paper No. 2015ACTL20

2015   24. **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   25. **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   26. **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   27. **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   28.  **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   29.  **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   30.  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   31.  **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   32.  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   33.  **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   34.  **Avanzi, B.**, Wong, B.
            *On a mean reverting dividend strategy with Brownian motion*
            UNSW Australian School of Business Research Paper No. 2009ACTL12

2009   35.  **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   36.  **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   37.  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   38.  **Avanzi, B.**, Gerber, H. U.
            *Optimal dividends in the dual model with diffusion*
            UNSW Australian School of Business Research Paper No. 2008ACTL10

2008   39.  **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 <br> AUD 310,000 from ARC <br> *Extreme Value Theory Approaches to Insurance in a Catastrophic Environment* <br> 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 <br> Natural Sciences and Engineering Research Council (NSERC) of Canada, CAD 70,000 <br> *Actuarial methods for assessing diversification effects in insurance* <br> Note: Funding for 2016–2020 (CAD 56,000) lapsed due to my return to Australia. |
| 2013 – 2020 | Australian Research Council (ARC) Linkage Project LP130100723 <br> AUD 232,449 from ARC, and AUD 88,412 from Industry Partners <br> *Modelling claim dependencies for the general insurance industry with economic capital in view: an innovative approach with stochastic processes* <br> 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) <br> 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 <br> *VALERIA: Valuation and Advanced Learning methods for Emerging, global Risks In Actuarial science* |
| 2019 – 2019 | Chief Investigator (with Pierre Lafaye de Micheaux) <br> Business School and Faculty of Science Silver Star, AUD 20,000 <br> *Complex dependence modelling to unravel relationships in Big Data* |
| 2017 – 2018 | Chief Investigator (with Greg Taylor and Bernard Wong) <br> Business School Linkage Silver Star, AUD 40,000 <br> *Quantitative risk management and optimal control for general insurers* <br> Partners: Insurance Australia Group Ltd; Suncorp Group Ltd |
| 2015 – 2015 | Chief Investigator (with Greg Taylor and Bernard Wong) <br> Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 10,000 <br> *General forms of dependency in chain ladder structures* |
| 2012 – 2013 | Chief Investigator (with Greg Taylor and Bernard Wong) <br> Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 35,000 <br> *An innovative approach to stochastic claims reserving with dependence* |
| 2012 – 2012 | Chief Investigator <br> Australian School of Business Special Research Grant, AUD 9,000 <br> *Towards more realistic dividend strategies in surplus models for risk businesses* |
| 2011 – 2011 | Chief Investigator (with Bernard Wong) <br> Australian School of Business Research Grant, AUD 25,000 <br> *Optimal dividend problems in surplus models with stochastic firm prospects* |
| 2010 – 2011 | Chief Investigator (with Bernard Wong) <br> Australian Actuarial Research Grant, Institute of Actuaries of Australia, AUD 20,000 <br> *On the economic value of aggregating dependent portfolios* |
| 2009 – 2009 | Chief Investigator (with John Evans) <br> UNSW 2009 International Research Collaboration Scheme, AUD 7,250 <br> *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 <br> *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

| | |
|---|---|
| 2022 – | TBA (UNSW with DP scholarship, external joint supervisor) |
| | *Position to fill* |
| 2022 – | Eric Dong (UNSW with scholarship, external joint supervisor) |
| | *In progress* |
| 2022 – | Xingyun (Claire) Tan (University of Melbourne with scholarship, co-supervisor) |
| | *In progress* |
| 2022 – | Jim (Yanfeng) Li (UNSW with scholarship, external joint supervisor) |
| | *In progress* |
| 2021 – | Lorenzo Marchi |
| | (University of Melbourne and KU Leuven - joint PhD with scholarship, principal 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 – | Guillaume Boglioni-Beaulieu |
| | (UNSW with UIPA and Canadian scholarships, joint, then external joint supervisor) |
| | *In progress* |
| | *Now Associate Lecturer at UNSW, Sydney, Australia. Next (tenured) Lecturer at Macquarie University, Sydney* |
| 2016 – 2022 | Alan Xian (UNSW with APA, joint, then external supervisor) |
| | *Now Consultant at Taylor Fry Consulting, Sydney, and Lecturer at Macquarie University, Sydney.* |
| 2016 – 2020 | Ka Wai (Hayden) Lau (UNSW with UIPA, joint supervisor) |
| | *Now 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) |
| | *Now Consultant at Taylor Fry Consulting, Sydney.* |
| 2013 – 2017 | Xinda Yang (UNSW with UIPA, joint supervisor) |
| | *Now Pricing Specialist at Insurance Australia Group (IAG), Sydney.* |
| 2013 – 2017 | Vincent Tu (UNSW with APA, joint supervisor) |
| | *Now at Taylor Fry Consulting, Sydney.* |

MPhil students supervision

| | |
|---|---|
| 2015 – 2016 | Guillaume Boglioni-Beaulieu, with "exceptional" performance (UdeM, joint superv.) |
| | *Now Associate Lecturer at UNSW, Sydney, Australia.* |
| 2014 – 2015 | Gwendal Combot, 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 Class 1 |

Honours students supervision

| | |
|---|---|
| 2022 | Melantha (Chenyi) Wang (UNSW, external supervisor) |
| | *in progress* |
| 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)<br>*Now at Insurance Australia Group (IAG), Sydney.* |
| 2016 | Mark Lavender, Honours Class 1 and the University Medal (UNSW, joint supervisor)<br>*Now Investment Banking Analyst at Allier Capital, Sydney.* |
| 2015 | Alan Xian, Honours Class 1 and the University Medal (UNSW, joint supervisor)<br>*Now Lecturer at Macquarie University, Sydney, Australia.* |
| 2014 | Clement Yeung, Honours Class 2:1 (UNSW, external supervisor)<br>*Now Data Scientist at Loan Market, Sydney.* |
| 2013 | Phuong Anh Vu, Honours Class 1 (UNSW, joint supervisor)<br>*PhD UNSW and Université de Montréal.*<br>*Now Consultant at Taylor Fry Consulting, Sydney.* |
| 2012 | Chung-Yu Liu, Honours Class 1 (UNSW, joint supervisor)<br>*Now Pricing Specialist at Insurance Australia Group (IAG), Sydney.* |
| 2012 | Vincent Tu, Honours Class 1 (UNSW, joint supervisor)<br>*PhD UNSW; Now at Taylor Fry Consulting, Sydney.* |
| 2011 | Jamie Tao, Honours Class 1 (UNSW, joint supervisor)<br>*Now Head of Balance Sheet Management, Treasury, at CLSA, Hong Kong.* |
| 2011 | Timothy Yip, Honours Class 1 (UNSW, joint supervisor)<br>*FIAA, Now Director at Taylor Fry Consulting, Sydney.* |
| 2010 | Luke Cassar, Honours Class 1 (UNSW, joint supervisor)<br>*FIAA, Now Senior Consultant at Finity Consulting, Sydney.* |
| 2010 | Jonathan Shen, Honours Class 1 and the University Medal (UNSW, joint supervisor)<br>*FIAA, Now Principal Consultant at Suncorp, 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
Insurance: Mathematics and Economics
ASTIN Bulletin
North American Actuarial Journal
Scandinavian 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
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, and FL
Canada: National Science and Engineering Research Council (NSERC)
Switzerland: National Science Foundation (SNSF)
Poland: National Science Centre (NSC)

External Promotions

UNSW: 2019 (twice)
Macquarie University: 2020

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) |

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**

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

Conference Presentations (peer-reviewed submissions)

| | | |
|---|---|---|
| 2023 | May | *Spoilt for Choice: Dealing with Many Categorical Features in Actuarial Machine Learning*<br>2023 International Congress of Actuaries<br>(joint with Greg Taylor, Melantha Wang, and Bernard Wong) |
| 2022 | July | *Stochastic Ensemble Loss Reserving*<br>25th International Congress on Insurance: Mathematics and Economics (Online)<br>(joint with Yanfeng Li, Bernard Wong, and Alan Xian) |
| 2022 | July | *Optimal reinsurance under terminal value constraints*<br>25th International Congress on Insurance: Mathematics and Economics (Online)<br>(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)

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

## Academic Seminars

| | | |
|---|---|---|
| 2022 | Jun | *Ensemble distributional forecasting for insurance loss reserving*<br>One World Actuarial Research Seminar |
| 2022 | Mar | *Optimal reinsurance under terminal value constraints*<br>Department of Econometrics and Business Statistics, Monash Business School, Melbourne (Australia) |
| 2021 | Nov | *Optimal reinsurance under terminal value constraints*<br>School of Risk and Actuarial Studies, UNSW Sydney (Australia) |
| 2019 | Jul | *A Multivariate Evolutionary Generalised Linear Model Framework with Adaptive Estimation for Claims Reserving*<br>Séminaires $L^2$ Lyon-Lausanne (ISFA, Lyon) |
| 2019 | Jun | *Stochastic dependence and general insurance capital: from data to models*<br>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*<br>Department of Mathematical Science, University of Copenhagen (Denmark) |
| 2019 | Feb | *Inference and prediction of counts using Markov-modulated non-homogeneous Poisson processes*<br>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*<br>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*<br>School of Risk & Actuarial Studies Research Day 2015 (Sydney, Australia) |
| 2015 | Apr. | *Dépendance et assurance: une histoire de corrélation?*<br>Club Mathématique de l'Université de Montréal, Montreal (Canada) |
| 2015 | Jan. | *Actuarial applications of Lévy copulas*<br>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*<br>Centre for Actuarial Studies, University of Melbourne (Australia) |
| 2012 | Dec. | *Dividendes et injections de capital dans le modèle dual : Stratégies optimales*<br>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*<br>Rosen-Huebner-McCahan Seminar, The Wharton School, UPENN (Philadelphia, U.S.A.) |
| 2010 | Nov. | *Forced savings and annuitisation: an international perspective*<br>University of St. Gallen (Switzerland) |

| | | |
|---|---|---|
| 2010 | Apr. | *On a mean reverting dividend strategy with Brownian motion*<br>UNSW Actuarial Studies Research Seminar (Sydney, Australia) |
| 2009 | Dec. | *On a mean reverting dividend strategy with Brownian motion*<br>Séminaires du Centre de Recherche en Mathématiques, Université de Montréal (Canada) |
| 2009 | Dec. | *On a mean reverting dividend strategy with Brownian motion*<br>Université Laval (Québec, Canada) |
| 2009 | Dec. | *Forced savings and annuitisation with cross-subsidies: a mutation of the beast*<br>Department of Statistics and Actuarial Science Seminars, University of Waterloo (Canada) |
| 2009 | Dec. | *On a mean reverting dividend strategy with Brownian motion*<br>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*<br>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*<br>International Research Workshop (UNSW, Sydney, Australia) |
| 2008 | Fev. | *Optimal dividends in the dual model with diffusion*<br>UNSW Actuarial Studies Research Seminar (Sydney, Australia) |
| 2006 | Dec. | *Optimal Dividends in the Dual Model*<br>Séminaires $L^2$ Lyon-Lausanne (ISFA, Lyon) |

Other attended conferences

| | | |
|---|---|---|
| 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

| 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.

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)
– Member, *Working group on diversifying evidence of teaching effectiveness*

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
    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)

| | |
|---|---|
| 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, *Fondation Comoedia*, Switzerland (group insurance) |
| 2007 – 2008 | Founder, Executive Director, *Fondation Comoedia*, Switzerland (group insurance) |
| 2006 – 2008 | Executive Director, Chair, *Fondation de prévoyance Artes et Comoedia*, Switzerland (pension fund, 200 employers, 2000 insured) |
| 2004 – 2004 | Internship and then consultant, *La Suisse Assurances* (actuarial department for group life), Lausanne, Switzerland |
| 2003 – 2003 | Internship, *Nestec S.A.* (Globe Project, Change management), Vevey, Switzerland |
| 2001 – 2003 | Teaching activities in Swiss public schools (mathematics, French, economics, law, accounting, IT) |

### Professional affiliations

| | |
|---|---|
| 2018 – | Member, Australian Institute of Company Directors (AICD) |
| 2014 – | Academic Member, Casualty Actuarial Society (CAS) |
| 2008 – | Affiliate member, Actuaries Institute of Australia[6] |
| 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) 11 October 2019 |

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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[6]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 In-
            surance 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