# Curriculum Vitae BENJAMIN AVANZI

Office Address: Department of Economics

The University of Melbourne

Level 4, Office 412 111 Barry Street Carlton VIC 2053

Australia

Office Phone: +61 3 8344 8667

b.avanzi@unimelb.edu.au

Homepage: http://www.benjaminavanzi.com

Date of CV: March 2021

#### **Education**

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**

2020 –	Professor of Actuarial Studies, Centre of Actuarial Studies, Department of Economics,
	Faculty of Business and Economics, University of Melbourne, 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 - 2017	Associate Head of School, 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.

<sup>&</sup>lt;sup>1</sup>'Adjunct Professor' of Actuarial Science

<sup>&</sup>lt;sup>2</sup> 'Associate Professor' of Actuarial Science

<sup>&</sup>lt;sup>3</sup>Formerly 'Australian School of Business'

#### RESEARCH

Insurance capital modelling (reserving, solvency, dependence), risk theory (optimal control of actuarial surplus models), modelling and statistical analysis of big data, robust estimation, social security and pensions, risk modelling in operations management.

# Major awards

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 March 2021)

Google Scholar: 1004 citations, h-index of 16 (since 2016: 610 citations, h-index of 13)

Scopus profile: 508 citations, h-index of 10

ResearchGate: RG Score of 22.78 (77.5 %ile), Research Interest of 436.5 (86 %ile), h-index of 13 (11

when self-citations are excluded)

# Submitted journal articles

2021 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B. SynthETIC: an individual insurance claim simulator with feature control Being revised after a R&R decision

2021 2. **Avanzi, B.**, Lau, H.., Wong, B.

On the optimality of joint periodic and extraordinary dividend strategies

[Q1,A\*]<sup>4</sup> Accepted subject to minor revisions in European Journal of Operational Research

#### 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.

- 2021 3. 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
- 4. 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, in press
- 2021 5. **Avanzi, B.**, Lau, H., Wong, B.

Optimal Periodic Dividend Strategies for Spectrally Negative Lévy Risk Processes With Fixed Transaction Costs

[Q1,A] Scandinavian Actuarial Journal, in press

<sup>&</sup>lt;sup>4</sup>[Quartile according to Scimago 2019, Journal rank according to the latest ABDC 2019 list]

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

- Avanzi, B., Taylor, B., Vu, P. A., Wong, B.
   On Unbalanced Data and Common Shock Models in Stochastic Loss Reserving
   [Q3,A] Annals of Actuarial Science, Vol. 15, Issue 1, pp. 173–203
- 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
- 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
- 2018 10. **Avanzi, B.**, Taylor, B., Wong, B. *Common shock models for claim arrays*[Q1,A] <u>ASTIN Bulletin</u>, Vol. 48, Issue 3, pp. 1109-1136
- 2018 11. **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 12. **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] <u>ASTIN Bulletin</u>, Vol. 48, Issue 2, pp. 647–672.
- 2017 13. **Avanzi, B.**, Pérez, J.-L., Wong, B., Yamazaki, K.

  On optimal joint reflective and refractive dividend strategies in spectrally positive Lévy models

  [Q1,A\*] <u>Insurance: Mathematics and Economics</u>, Vol. 72, pp. 148–162.
- 2016 14. **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 15. 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 16. **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 17. 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 18. Avanzi, B., Tao, J., Wong, B., Yang, X.
Capturing Non-Exchangeable Dependence in Multivariate Loss Processes with Nested Archimedean Lévy Copulas
[Q3,A] Annals of Actuarial Science, Vol. 10, Issue 01, pp. 87–117.

2016 19. **Avanzi, B.**, Tu, V., Wong, B. *A note on realistic dividends in actuarial surplus models*[Q3,B] <u>Risks</u>, Vol. 4, Issue 4, Number 37

2014 20. **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 21. 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 22. **Avanzi, B.**, Purcal, S. Annuitisation and cross-subsidies in a two-tiered retirement saving system [Q3,A] Annals of Actuarial Science, Vol. 8, Part 2, pp. 234–252.

2013 23. **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 24. 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 25. **Avanzi, B.**, Wong, B.

On a mean reverting dividend strategy with Brownian motion

[Q1,A\*] <u>Insurance: Mathematics and Economics</u>, Vol. 51, Issue 2, pp. 229–238.

2011 26. **Avanzi, B.**, Shen, J., Wong, B. *Optimal dividends and capital injections in the dual model with diffusion* [Q1,A] ASTIN Bulletin, Vol. 41, Issue 2, pp. 611–644.

2011 27. **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 28. **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 29. Avanzi, B. Strategies for Dividend Distribution: A Review
 [Q2,A] North American Actuarial Journal, Vol. 13, Issue 2, pp. 217–251.

2008 30. 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 31. Avanzi, B., Gerber, H. U.

Optimal dividends in the dual model with diffusion [Q1,A] ASTIN Bulletin, Vol. 38, Issue 2, pp. 653–667.

2007 32. **Avanzi, B.**, Gerber, H. U., Shiu, E. S. W. *Optimal dividends in the dual model*[Q1,A\*] 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 <u>2018 General Insurance Seminar</u> (peer reviewed), 12-13 November 2018 (Sydney, Australia)

- 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)
- 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

Other R codes related to published papers, with several reproducible examples, are available from the GitHub page

2020 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B.

CRAN package: *SynthETIC*: an individual insurance claim simulator with feature control <a href="https://CRAN.R-project.org/package=SynthETIC">https://CRAN.R-project.org/package=SynthETIC</a>

#### Websites

2021 1. **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)

- 2020 1. **Avanzi, B.**, Taylor, G., Wang, M., Wong, B. *SynthETIC: an individual insurance claim simulator with feature control* arXiv Qfin.RM 2008.05693
- 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 3. 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
- 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 5. 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
- 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
- 7. 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
- 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
- Avanzi, B., Tu, V., Wong, B.
   Optimal Dividends Under Erlang(2) Inter-Dividend Decision Times
   UNSW Business School Research Paper No. 2017ACTL02
- 2016 10. **Avanzi, B.**, Taylor, B., Wong, B.

  Common shock models for claim arrays

  UNSW Business School Research Paper No. 2016ACTL07
- 2016 11. 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 12. 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 13. 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 14. 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 15. Avanzi, B., Tu, V., Wong, B.

A note on realistic dividends in actuarial surplus models UNSW Business School Research Paper No. 2015ACTL20

2015 16. 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 17. 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 18. **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 19. **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 20. **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 21. 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 22. 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 23. **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 24. 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 25. **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 26. Avanzi, B., Wong, B.
  On a mean reverting dividend strategy with Brownian motion
  UNSW Australian School of Business Research Paper No. 2009ACTL12
- 2009 27. **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 28. **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 29. 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 30. **Avanzi, B.**, Gerber, H. U.

  Optimal dividends in the dual model with diffusion

  UNSW Australian School of Business Research Paper No. 2008ACTL10
- 2008 31. **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 428,000 from ARC

Extreme Value Approaches to Catastrophe Risks

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 – 2023 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

20,000
, Switzer
•

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

2019 –	Yunshen Yang (UNSW Scientia Scholar, co-supervisor)
0017	In progress
2017 –	Guillaume Boglioni-Beaulieu
	(UNSW with UIPA and Canadian scholarships, joint supervisor)
	In progress
	Now Associate Lecturer at UNSW, Sydney, Australia.
2016 –	Alan Xian (UNSW with APA, joint supervisor)
	In progress
	Now Lecturer at Macquarie University, Sydney, Australia.
2016 - 2020	Ka Wai (Hayden) Lau (UNSW with UIPA, joint supervisor)
	Now at Insurance Australia Group (IAG), Sydney.
2014 - 2019	Phuong Anh Vu (UdeM & 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' Thesis students supervision

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

# Honours students supervision

2021	Jim (Yanfeng) Li (UNSW, co-supervisor)
	in progress
2021	David Yu (UNSW, co-supervisor)
	in progress
2020	Muhammed Al-Mudafer, Honours Class 1 (UNSW, co-supervisor)
	Now at Insurance Australia Group (IAG), Sydney.
2016	Mark Lavender, Honours Class 1 and the University Medal (UNSW, joint supervisor)
	Now Investment Banking Analyst at Allier Capital, Sydney.
2015	Alan Xian, Honours Class 1 and the University Medal (UNSW, joint supervisor)
	Now Lecturer at Macquarie University, Sydney, Australia.

Now Data Scientist at Loan Market, Sydney.	
Now Data Scientist at Loan Warket, Sydney.	
2013 Phuong Anh Vu, Honours Class 1 (UNSW, joint supervisor)	
PhD UNSW and Université de Montréal.	
Now Consultant at Taylor Fry Consulting, Sydney.	
2012 Chung-Yu Liu, Honours Class 1 (UNSW, joint supervisor)	
Now Pricing Specialist at Insurance Australia Group (IAG), Sydney.	
Vincent Tu, Honours Class 1 (UNSW, joint supervisor)	
PhD UNSW; Now at Taylor Fry Consulting, Sydney.	
2011 Jamie Tao, Honours Class 1 (UNSW, joint supervisor)	
Now Head of Balance Sheet Management, Treasury, at CLSA, Hong Kor	ng.
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 Principal Consultant at Suncorp, Sydney.	

#### Referee and review activities

#### **Editorial duties**

2018 – *ASTIN Bulletin*, Editor

2018 – 2021 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

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

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

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, and DECRA Canada: National Science and Engineering Research Council (NSERC)

Switzerland: National Science Foundation (SNSF)

Poland: National Science Centre (NSC)

#### Scientific committee of conferences

2020	Online International Conference in Actuarial science, data science and finance
2020 –	Conference in Actuarial Science & Finance on Samos (Samos, Greece)
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**

- 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 Plenary Speaker at 6<sup>th</sup> 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

  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 UNSW-MacquarieU Workshop on Risk: Modelling, optimization and inference (Sydney, Australia)
- 2017 Nov. Correlations between lines of business Are they real or illusionary? CAS 2017 Annual Meeting (Anaheim, CA, USA)
- 2014 July On optimal periodic dividend strategies in the dual model with diffusion Gerber-Shiu Workshop, University of Hong Kong (Hong Kong)
- 2011 Nov. Modelling Dependence in Insurance Claims Processes with Lévy Copulas Advances in Financial Risk Workshop, Macquarie University (Sydney, Australia)
- 2010 Dec. Claim dependence modelling with Lévy copulas
  International Conference in Applied Statistics and Financial Mathematics (Hong Kong)

( antaranca	Presentations	DOOK KOMMONION	cubmiccionel	
		<b>( )</b>	,	

- 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 motion5th 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

- 2021 Mar Stochastic loss reserving with neural networks: distribution selection with the MDN and ResMDN
  - Actuarial Science and Financial Mathematics seminar series, University of Waterloo (Canada)
- 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 Fev. 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

- 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 Rick and Actuarial Studies Teaching Innovation Award for "Use of Learning	
2010	2015 School of Risk and Actuarial Studies Teaching Innovation Award, for "Use of Learnin Catalytics in the Actuarial Program"		
2011	Nominated for a 2012 Vice-Chancellor Award for Teaching Excellence		
2011			
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 t	aught		
2021	S2	ACTL 10001 Introduction to Actuarial Studies (B.Sc., University of Melbourne)	
2021		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		ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)	
2019		Actuarial Journals and the Publishing Process (PhD, University of Lyon 1)	
2018		ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)	
2018		ACTL 4003/5003 Research Methods in Actuarial Science (Honours and HDR, UNSW)	
2017		ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)	
2017		ACTL 4003/5003 Research Methods in Actuarial Science (Honours and HDR, UNSW)	
2016		ACTL 1101 Introduction to Actuarial Studies (B.Sc., UNSW)	
2016		ACTL 3141 Actuarial Statistics (B.Sc., UNSW)	
2015		ACTL 5106 Insurance Risk Models (M.Sc., UNSW)	
2015		ACTL 3162 Insurance Risk Models (B.Sc., UNSW)	
2014		ACT3284 Modèles en assurances IARD (B.Sc., Université de Montréal)	
2014		ACT 5106 L. Di L. M. L. L. (M. G. LINGM)	
2013		ACTL 5106 Insurance Risk Models (M.Sc., UNSW)	
2013		ACTL 3003 Insurance Risk Models (B.Sc., UNSW)	
2013		ACTL 5104 Actuarial Statistics (M.Sc., UNSW)	
2013		ACTL 3001 Actuarial Statistics (B.Sc., UNSW)	
2012		ACTL 2003 Insurance Risk Models (M.Sc., UNSW)	
2012		ACTL 5106 Insurance Risk Models (B.Sc., UNSW)	
2011		ACTL 3003 Insurance Risk Models (M.Sc., UNSW)	
2011	52	ACTL 3003 Insurance Risk Models (B.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) 2010 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)	2011	S1	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)	2011	S1	ACTL 2001 Financial Mathematics (B.Sc., UNSW)
ACTL 5102 Financial Mathematics (M.Sc., UNSW)  ACTL 2001 Financial Mathematics (B.Sc., UNSW)  ACTL 4003/5003 Research Topics in Actuarial Science (Honours and HDR, UNSW)  ACTL 5106 Insurance Risk Models (M.Sc., UNSW)  ACTL 5102 Financial Mathematics (M.Sc., UNSW)  ACTL 5102 Financial Mathematics (M.Sc., UNSW)  ACTL 5103 Financial Mathematics (B.Sc., UNSW)  ACTL 2001 Financial Mathematics (B.Sc., UNSW)  ACTL 5106 Insurance Risk Models (M.Sc., UNSW)  Consumption of Sestion des opérations (B.Sc., University of Lausanne)  Credibility Theory (M.Sc., University of Lausanne)  Gestion des opérations (B.Sc., University of Lausanne)  Laboratory of selected topics in actuarial mathematics (M.Sc., University of Lausanne)	2010	SS	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)	2010	SS	ACTL 2001 Financial Mathematics (B.Sc., UNSW)
ACTL 4003/5003 Research Topics in Actuarial Science (Honours and HDR, UNSW) ACTL 5106 Insurance Risk Models (M.Sc., UNSW) ACTL 5102 Financial Mathematics (M.Sc., UNSW) ACTL 2001 Financial Mathematics (B.Sc., UNSW) ACTL 5106 Insurance Risk Models (M.Sc., UNSW) ACTL 5106 Insurance Risk Models (M.Sc., UNSW) Gestion des opérations (B.Sc., University of Lausanne) Credibility Theory (M.Sc., University of Lausanne) Gestion des opérations (B.Sc., University of Lausanne) Laboratory of selected topics in actuarial mathematics (M.Sc., University of Lausanne)	2010	S1	ACTL 5102 Financial Mathematics (M.Sc., 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)	2010	S1	ACTL 2001 Financial Mathematics (B.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)	2009	S2	ACTL 4003/5003 Research Topics in Actuarial Science (Honours and HDR, 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)	2009	S2	ACTL 5106 Insurance Risk Models (M.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)	2009	S1	ACTL 5102 Financial Mathematics (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)	2009	S1	ACTL 2001 Financial Mathematics (B.Sc., UNSW)
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)	2008	S2	ACTL 5106 Insurance Risk Models (M.Sc., UNSW)
2007 S1 Gestion des opérations (B.Sc., University of Lausanne) 2005 S2 Laboratory of selected topics in actuarial mathematics (M.Sc., University of Lausanne)	2008	S1	Gestion des opérations (B.Sc., University of Lausanne)
2005 S2 Laboratory of selected topics in actuarial mathematics (M.Sc., University of Lausanne)	2007	S2	Credibility Theory (M.Sc., University of Lausanne)
	2007	S1	Gestion des opérations (B.Sc., University of Lausanne)
2005 S1 Mathematics of Lead Time (MAS, Bordeaux Business School)	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.

# Aca

**UNSW** 

cademic engagement and leadership					
2021 – 2022	Elected Member, Teaching and Learning Quality Assurance Committee (TALQAC), The University of Melbourne				
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				
	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,				

- 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

- 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

- 2020 2020 University of Melbourne level C
- 2019 2019 UNSW Business School PhD Fellow mentor
- 2017 2017 Mentor to 1 UNSW Scientia Scholar
- 2016 2016 Mentor to 1 UNSW Scientia Scholar
- 2015 2016 Mentor to 1 ECR academic from UNSW Business School

#### EXTERNAL ENGAGEMENT AND LEADERSHIP

# Professional appointments (selected)

	2018 - 2019	Non Executive Director.	Lycee Condorcet the In	nternational French School of S	vdnev
--	-------------	-------------------------	------------------------	---------------------------------	-------

- 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	$(\Delta ICD)$	
2010 <b>–</b>	wember,	Australian	mstitute or	Company	Directors	(AICD)	

- 2014 Academic Member, Casualty Actuarial Society (CAS)
- 2008 Affiliate member, Actuaries Institute of Australia<sup>5</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

#### 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

#### Other non academic publications

2019 1. **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 2. **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).

<sup>&</sup>lt;sup>5</sup>Inactive in 2013 and 2014.

2015 3. 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 4. 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

- 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)

#### **Events**

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