

# Katrien Antonio

Professor

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📄 <https://katrienantonio.github.io>

🌐 [katrien-antonio](#)

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CV with [hyperlinks in blue](#)

## Bio

Birth September 9, 1981 (Boom, Belgium)  
Citizenship Belgian  
My family Married, living in Mechelen (Belgium)  
Children: Bas (born 2010) and Rik (born 2012)

## Education

- 2013 **Teaching Portfolio (onderwijsportfolio)**, *KU Leuven*, Leuven, Belgium.  
[Feedback given by peer review committee with prof. Pierre Van Hecke as chair](#)
- 2009 **Basis Kwalificatie Onderwijs**, *University of Amsterdam and Centrum voor Nascholing*, Amsterdam, The Netherlands.  
Teaching degree for higher education
- 2003 - 2007 **PhD in Mathematics**, *KU Leuven*, Leuven, Belgium.  
*Statistical Tools For Non-Life Insurance: Essays On Claims Reserving And Ratemaking For Panels And Fleets.*  
Promoter: prof. Jan Beirlant, Committee members: prof. Jan Dhaene, dr. Goedele Dierckx, prof. Edward (Jed) Frees, prof. Marc Goovaerts, prof. Wim Schoutens.
- 2001 - 2003 **MSc in Mathematics**, *KU Leuven*, Leuven, Belgium.  
Obtained *summa cum laude*.
- 1999 - 2001 **BSc in Mathematics**, *KU Leuven*, Leuven, Belgium.  
Obtained *cum laude*.

## Academic Positions

[As professor](#)

- October 1, **Professor in Actuarial Science and Insurance Analytics**, *KU Leuven*, Leuven, Belgium.  
2017 - now Faculty of Economics and Business, Department of Accountancy, Finance and Insurance, Research Group Insurance
- 2016 - now **Associate Professor in Actuarial Science**, *University of Amsterdam*, Amsterdam, The Netherlands.  
Faculty of Economics and Business, Amsterdam School of Economics, Section of Actuarial Science and Mathematical Finance
- 2018 - now **Visiting Professor**, *Aarhus University*, Aarhus, Denmark.  
Faculty of Economics and Business, Aarhus Summer University program
- 2016 - now **Visiting Professor**, *University of Ljubljana*, Ljubljana, Slovenia.  
Faculty of Economics and Business, MSc in Quantitative Finance and Actuarial Sciences
- 2011 - now **Visiting Professor**, *Collegio Carlo Alberto*, Torino, Italy.  
MSc in Finance, Insurance and Risk Management
- 2010 - now **Professor in the Actuarial Practice Cycle**, *Amsterdam Business School*, University of Amsterdam, The Netherlands.  
Executive program in Actuarial Science
- 2013 - 2017 **Associate Professor in Actuarial Science**, *KU Leuven*, Leuven, Belgium.  
Faculty of Economics and Business, Department of Accountancy, Finance and Insurance, Research Group Insurance

- 2007 - 2016 **Assistant Professor in Actuarial Science**, *University of Amsterdam*, Amsterdam, The Netherlands.  
Faculty of Economics and Business, Amsterdam School of Economics, Section of Actuarial Science
- 2010 - 2013 **Assistant Professor in Actuarial Science**, *KU Leuven*, Leuven, Belgium.  
Faculty of Economics and Business, Department of Accountancy, Finance and Insurance, Research Group Insurance
- 2008 **Honorary Fellow**, *University of Wisconsin*, Madison, USA.  
School of Business, Actuarial Science, Risk Management and Insurance Department, August - December 2008.
- As director*
- October 1, 2018 - now **Program Director of the MSc of Actuarial and Financial Engineering**, *KU Leuven*, Leuven, Belgium.  
Faculty of Economics and Business
- October 1, 2017 - now **Program Director FEB Zij-Instituut Masters**, *KU Leuven*, Leuven, Belgium.  
Faculty of Economics and Business
- March 2017 - now **Ombudsman PhD students**, *KU Leuven*, Leuven, Belgium.  
Faculty of Economics and Business (with prof. Filip Abraham)
- 2015 - now **Co-Director of LRisk: the Leuven Research Centre on Financial and Insurance Risk Analysis**, *LRisk*, KU Leuven, Belgium.

## Research Interests

*In general:* actuarial science, insurance analytics, data science, applied statistics, quantitative risk modeling

*In particular:* loss reserving, ratemaking, pricing, non-life insurance, life insurance, telematics, health insurance, mortality modelling, R, teaching statistics, teaching actuarial science, educational technology and innovations

## Editorial boards

- 2015 - now **Member of the Editorial Board**, *European Actuarial Journal*, Springer.

## (Research) Grants

- 2019 Chairholder of the **Ageas Research Chair** on Insurance Analytics, KU Leuven, with prof. Bart Baesens.
- 2018 FWO PhD Fellow for the project *MICRO: Methods for Individual Claims Reserving Operations*, financing PhD student Jonas Crevecoeur, October 2018 - September 2022. Promoter: Katrien Antonio.  
GHUM Interdisciplinary Research Project *Understanding Insurance in the Era of Big Data and Personalization of Risk*. Promoters: Katrien Antonio, Ine Van Hoyweghen and Caroline Van Schoubroeck.
- 2017 FWO SB grant for the project *TRIPS: Telematics Redefining Insurance Pricing Strategies*, financing PhD student Roel Henckaerts, January 2018 - December 2021. Promoter: Katrien Antonio.
- 2017 Chairholder of the **Argenta Research Chair** on Loss Modeling and Reserving Analytics, KU Leuven.
- 2015 Nationale Bank van België (NBB) finaliteitsbeurs (50,000 euro) voor *Econometrische modellen voor verzekeringstoepassingen: essays over Bayesiaanse sterftemodellen, zware staarten en extreme waarden statistiek*; as promoter, with co-promoters prof. Jan Beirlant (KU Leuven, campus Leuven) and prof. Goedele Dierckx (KU Leuven, campus Brussels).  
C2 research project (601,500 euro), KU Leuven; as promoter, with co-promoters prof. Bart Baesens (KU Leuven, Faculty of Economics and Business) and prof. Caroline Van Schoubroeck (KU Leuven, Faculty of Law).  
Chairholder of the **Ageas CE Research Chair** on Insurance Analytics, KU Leuven, with prof. Bart Baesens.
- 2014 Leuven University Fund on Mortality Research, sponsored by the Institute of Actuaries in Belgium.
- 2013 IWT Strategisch Basis Onderzoek grant for the project *Innovative pricing and reserving for non-life insurance* (nr. 131173), financing PhD student Roel Verbelen, January 2014-December 2017. Promoter: Gerda Claeskens, co-promoter: Katrien Antonio.

- Carefin – Bocconi Center for Applied Research in Finance research grant (3,000 euro) for the project *Bayesian mortality models for two and more (sub)populations*, with A. Bardoutsos and W. Ouburg.
- 2012 Co-chairholder of the AG Insurance Research Chair on health insurance, KU Leuven, with prof. Jan Dhaene and prof. Michel Denuit.
- 2011 FWO research project (244,000 euro) *Stochastic models in health insurance*, as co-promoter, with prof. Jan Dhaene and prof. Michel Denuit.
- 2009 VENI grant by NWO (250,000 euro) for the project *Non-life: a life insurance approach. Veni is targeted at outstanding researchers who have recently obtained their PhD. They are at the start of their scientific career and display a striking talent for scientific research.*
- 2008 Individual grants competition organized by the Casualty Actuarial Society, Actuarial Foundation and the Committee on Knowledge Extension Research of the Society of Actuaries, a 7,500 USD grant for the project *Stochastic Claims Reserving: Micro Models for Run-Off, Incorporating Expert Opinion, and the Interaction with Extreme Value Methodology.*

## Awards

### Personal awards

- 2018 Special appreciation for teaching, Faculty of Economics and Business, KU Leuven.
- 2015 Nominated for the practitioner's prize *Actuariel talent van het jaar*, during the yearly *Actuaris dag* in The Netherlands. I obtained the 2nd place in the debate and voting (with Pim Van Diepen as winner).
- 2014 Special appreciation for teaching, Faculty of Economics and Business, KU Leuven.
- 2013 *Honorable mention Teacher of the year* competition at University of Amsterdam.  
Best teacher award *Actuarial Practice Cycle* (based on students' evaluations), Amsterdam Business School, Amsterdam, The Netherlands.  
*Best session award* as voted by the participants at the *Casualty Loss Reserve Seminar*, Casualty Actuarial Society, Boston, USA.
- 2011 *Johan de Witt prize* (10,000 euro) for the paper *Micro-level stochastic loss reserving in general insurance*, with dr. Richard Plat. The Johan de Witt prize is a best paper award, yearly awarded by the Dutch actuarial association (AG-AI).

### Awards for MSc & PhD papers written under my guidance

- 2018 Promoter of the MSc thesis of Tine Huybrechts (entitled: *Updating the IA|BE 2015 mortality projection model.*), written at KU Leuven, IA|BE thesis prize (1,000 euro) for the best actuarial master thesis.  
Co-promoter of the PhD thesis of Frank Van Berkum (entitled: *Models for population-wide and portfolio-specific mortality*), written at University of Amsterdam, final nominee Netspar PhD thesis award.  
Best presentation award during the 22nd Insurance: Mathematics and Economics conference at UNSW, Sydney, for PhD student Roel Henckaerts, presenting *Tree-based machine learning for insurance pricing.*
- 2017 Promoter of the MSc thesis of Roel Henckaerts (entitled: *Risk factors in P&C insurance pricing. A data driven strategy with GAMs, regression trees and GLMs.*), written at KU Leuven, IA|BE thesis prize (1,000 euro) for the best actuarial master thesis.  
Runner Up best presentation award during PARTY - Perspectives on Actuarial Risks in Talks of Young researchers, for PhD student Roel Henckaerts, presenting *Using risk factors in P&C insurance pricing: a data driven strategy with GAMs, regression trees and GLMs.* by Henckaerts, Antonio, Clijsters & Verbelen.
- 2016 2nd Prize best presentation award during the 9th Conference in Actuarial Science and Finance in Samos for PhD student Roel Verbelen, presenting *A statistical modeling approach for car insurance pricing with telematics data* by Verbelen, Antonio & Claeskens.  
Promoter of the MSc thesis of Rachel Bonsel (entitled: *The effect of the economic climate on morbidity*), shortlist H.K. Van Nieuwenhuisprijs for the best MSc thesis in economics at the University of Amsterdam (Jury members: UvA professors Diks, Boswijk, Boot and Salomon).

- 2015 Best presentation award during the Actuarial Research Conference in Toronto for PhD student Roel Verbelen, presenting *Multivariate mixtures of Erlangs for density estimation under censoring* by Verbelen, Antonio & Claeskens.
- Promoter of the MSc thesis of Maxime Clijsters (entitled: *Dealing with continuous variables and geographical information in non-life insurance ratemaking. Practical solutions applied to a car insurance data set*), written at KU Leuven, Belfius thesis prize for the best master thesis in actuarial and financial engineering, Johan de Witt prize (5,000 euro) for the best quantitative master paper, IA|BE thesis prize (1,000 euro) for the best actuarial master thesis. The Johan de Witt prize (for MSc papers) is a best paper award, yearly awarded by the Dutch actuarial association (AG-AI).
- Promoter of the MSc thesis of Bruno Delaet (entitled: *Regression trees and ensembles of trees in P&C pricing*), written at KU Leuven, IA|BE thesis prize for the best actuarial master thesis.
- 2014 Promoter of the MSc thesis of Lize Devolder (entitled: *A comparative study of stochastic mortality models for Belgian data, with emphasis on computational aspects of calibration and projection*), written at KU Leuven, Belfius thesis prize for the best master thesis in actuarial and financial engineering.
- Promoter of the MSc thesis of Roel Verbelen (entitled: *Phase-type distributions and mixtures of Erlangs: a study of theoretical concepts, calibration techniques & actuarial applications*), written at KU Leuven, IA|BE thesis prize (1,000 euro) for the best actuarial master thesis.
- Promoter of the MSc thesis of Wilbert Ouburg (entitled: *Single and multi-population mortality models for Dutch data*), written at University of Amsterdam, Netspar MSc thesis award (3,000 euro). Netspar is the Network of Pensions, Aging and Retirement in The Netherlands.
- 2013 Promoter of the MSc thesis of Bruno De Laet (entitled: *Mortality improvement rate models*), written at KU Leuven, AFI thesis prize (1,000 euro) for the best MSc thesis in insurance.
- Promoter of the MSc thesis of Wilbert Ouburg (entitled: *Single and multi-population mortality models for Dutch data*), written at University of Amsterdam, nominated for the Johan de Witt prize for the best MSc thesis in actuarial science.
- Promoter of the MSc thesis of Hok-Kwan Kan (entitled: *A Bayesian mortality forecasting framework for population and portfolio mortality*), written at University of Amsterdam, Netspar MSc thesis award (3,000 euro). Netspar is the Network of Pensions, Aging and Retirement in The Netherlands.
- 2012 Promoter of the MSc thesis of Laurence Verhey and Siska Depril (entitled: *Een analyse van het AG-AI sterftemodel*), written at KU Leuven, AFI thesis prize (1,000 euro) for the best MSc thesis in insurance.
- Promoter of the MSc thesis of Hok-Kwan Kan (entitled: *A Bayesian mortality forecasting framework for population and portfolio mortality*), written at University of Amsterdam, 2nd place Johan de Witt prize for the best MSc thesis in actuarial science. The Johan de Witt prize (for MSc papers) is a best paper award, yearly awarded by the Dutch actuarial association (AG-AI).
- Promoter of the MSc thesis of Frederik Borgers (entitled: *Micro-level stochastic loss reserving*), written at KU Leuven, IA|BE (Institute of Belgian Actuaries) thesis prize (1,000 euro) for the best MSc thesis in actuarial science.
- 2011 Promoter of the MSc thesis of Frank Van Berkum (entitled: *Onderzoek naar een nieuwe tarifiering voor autoverzekeringen: analyse van de portefeuille van Bruns ten Brink Assuradeuren B.V.*), H.K. Van Nieuwenhuisprijs for the best MSc thesis in economics at the University of Amsterdam.

## Research Stays Abroad

In total I spent 10 months abroad. Besides these research stays, I have an appointment at the University of Amsterdam since 2007 (full time from 2007-2010 and part time since 2010), where I actively engage in research, teaching (BSc, MSc and executive level), BSc and MSc thesis supervision, conference organization and interaction with corporate connections.

- 2017 University of Lausanne, Switzerland, July 2017 (with Hansjoerg Albrecher, Séverine Arnold-Gaille).
- 2016 University of Wisconsin, Madison, USA, July-August 2016 (2 weeks) (with Peng Shi, Jed Frees).
- 2015 UQAM, Montreal, Canada, July-August 2015 (6 weeks) (with Mathieu Pigeon, Jean-Philippe Boucher).
- Rijksuniversiteit Groningen, Groningen, The Netherlands, March 2015 (1 week) (with Laura Spierdijk).

- 2012 Cass Business School, City University, London, December 2012 (1 week) (with Jens Perch Nielsen and Maria Miranda Dolores Martinez).  
University of Lyon (France), ISFA, April 15 - May 5 2012 (3 weeks) (with Stéphane Loisel and Ragnar Norberg).
- 2011 University of Barcelona (Spain), Department of Econometrics, April 2011 (2 weeks) (with Montserrat Guillén and Ana-Maria Perez Marin).
- 2009 University of Barcelona (Spain), Department of Econometrics, September - October 2009 (2 weeks) (with Montserrat Guillén and Ana-Maria Perez Marin).
- 2008 University of Wisconsin (Madison), School of Business, Actuarial Science, Risk Management and Insurance Department, Fall semester 2008-2009 (with Jed Frees).
- 2006 University of Wisconsin (Madison), School of Business, Actuarial Science, Risk Management and Insurance department, April-June 2006 (6 weeks) (with Jed Frees).

## PhD students

- 2017 - 2021 **Laurens Deprez**, (*with Robert Boute*), KU Leuven.
- 2016 - 2020 **Jonas Crevecoeur**, KU Leuven, 1 paper published in: European Journal of Operational Research.
- 2016 - 2020 **Roel Henckaerts**, KU Leuven, 1 paper published in: Scandinavian Actuarial Journal.
- 2015 - 2019 **Sander Devriendt**, KU Leuven, 1 paper published in: European Actuarial Journal.
- 2014 - 2018 **Frank Van Berkum**, (*with Michel Vellekoop*), University of Amsterdam, 2 papers published in: ASTIN Bulletin, Scandinavian Actuarial Journal.  
Graduated March 28, 2018 (first placement: PwC, Amsterdam)
- 2014 - 2018 **Roel Verbelen**, (*with Gerda Claeskens*), KU Leuven, 3 papers published in: ASTIN Bulletin, Journal of Lifetime Data Analysis, JRSS C.  
Graduated June 13, 2017 (first placement: Finitly Consulting, Sydney, Australia)
- 2012 - 2016 **Anastasios Bardoutsos**, (*with Jan Beirlant*), KU Leuven, 3 papers published in: Journal of Applied Probability, European Actuarial Journal, Statistics & Probability Letters.  
Graduated May 13, 2016 (first placement: University of Groningen)
- 2012 - 2016 **Els Godecharle**, KU Leuven, 1 paper published in North American Actuarial Journal, 1 paper published in ASTIN Bulletin.  
Graduated May 13, 2016 (first placement: KPMG, Melbourne, Australia)

## Postdoc researchers

- 2018 - 2109 **María Óskarsdóttir**, KU Leuven.  
1 year (first placement: University of Reykjavik)
- 2017 - 2018 **Tom Reynkens**, KU Leuven.  
1 year (first placement: Belfius bank, Brussels)
- 2018 **Roel Verbelen**, KU Leuven.  
3 months (first placement: Finitly Consulting, Sydney, Australia)

## Membership of PhD and HdR juries

- 2019 **Felix Wahl**, *Stockholms Universitet*, Sweden, Promoter: prof. Mathias Millberg Lindholm.  
**Yohann Le Faou**, *Sorbonne Université, Paris*, France, Promoter: prof. Olivier Lopez.  
**Karim Barigou**, *KU Leuven*, Belgium, Promoter: prof. Jan Dhaene.  
**Hamza Hanbali**, *KU Leuven*, Belgium, Promoter: prof. Jan Dhaene.
- 2018 **Yuan Yue**, *University of Amsterdam*, The Netherlands, Promoter: prof. Roger Laeven and prof. Jan Magnus.  
**Lenny Stoeldraijer**, *University of Groningen*, The Netherlands, Promoter: prof. Fanny Janssen and prof. Leo Van Wissen.  
**Eugen Stripling**, *KU Leuven*, Belgium, Promoter: prof. Monique Snoeck.



- 2017 **Liivika Tee**, *Tartu University*, Estonia, Promoter: prof. Meelis Kaarik.  
**Liang Chen**, *Heriot Watt University*, Edinburgh, Scotland, Promoter: prof. Torsten Kleinow, prof. Andrew Cairns.
- 2016 **Arthur Charpentier**, *Université de Rennes*, France, Habilitation à Diriger des Recherches.  
**Anas Abdallah**, *Université de Laval*, Canada, Promoter: prof. Helene Cossette (Laval), Jean-Philippe Boucher (UQAM).
- 2015 **Véronique Van Vlasselaer**, *KU Leuven*, Belgium, Promoter: prof. Bart Baesens.  
(as chair)  
**Inge Vrinssen**, *KU Leuven*, Belgium, Promoter: prof. Irène Gijbels, Co-promoter: prof. Gerda Claeskens.  
**Monica Forys**, *KU Leuven*, Belgium, Promoter: prof. Wim Schoutens.  
**Hong Li**, *Tilburg University*, The Netherlands, Promoter: prof. Anja de Waegenaere, prof. Bertrand Melenberg.  
**Leo Guelman**, *University of Barcelona*, Spain, Promoter: prof. Montserrat Guillen.
- 2014 **Ying Yang**, *Tilburg University*, The Netherlands, Promoter: prof. Anja de Waegenaere, prof. Bertrand Melenberg.  
**Mathieu Pigeon**, *Université Catholique de Louvain-la-Neuve*, Belgium, Promoter: prof. Michel Denuit.
- 2013 **Daniël Linders**, *KU Leuven*, Belgium, Promoter: prof. Jan Dhaene.  
**Philippe Louis**, *KU Leuven*, Belgium, Promoter: prof. Bart Baesens.
- 2012 **Sara Maccaferri**, *KU Leuven*, Belgium, Promoter: prof. Wim Schoutens.  
**Julien Tomas**, *UvA*, The Netherlands, Promoter: prof. Rob Kaas.
- 2011 **Florence Guillaume**, *KU Leuven & TU Eindhoven*, Belgium & The Netherlands, Promoter: prof. Wim Schoutens.
- 2010 **Richard Plat**, *UvA*, The Netherlands, Promoter: prof. Antoon Pelsser.

## Service

### Corporate

I regularly interact with corporate connections through in house training. Examples of recent in house training and continuous professional development for actuaries and data analysts (developed and taught by my research team):

- Data science and machine learning for risk professionals (2 or 3 days)
- Predictive modeling (2 days)
- Predictive modeling in non-life insurance, with SAS (2 days)
- A gentle introduction to R for actuaries (half day)
- Loss modeling analytics (half day)
- Individual claims reserving (half day)
- Predictive modeling using R (2 days)
- Stochastic modeling of longevity risk (2 days)
- Loss reserving analytics
- Mixture modeling and the EM algorithm (half day)
- Insurance fraud analytics (half day).

### Social

- Spring 2019 **Two day training on Modeling, Estimation and Hedging of Longevity Risk**, *European Actuarial Academy*, Warschau, Poland.  
with W. Ouburg (Nationale Nederlanden) and M. Vellekoop (UvA)
- August 2016 **Two day training on Modeling, Estimation and Hedging of Longevity Risk**, *Summer School of the Institute of Actuaries*, Leuven, Belgium.  
with W. Ouburg (Delta Lloyd and UvA) and M. Vellekoop (UvA)

- March 2016 **Two day training on Modeling and Validating mortality under Solvency II**, *European Actuarial Academy*, Madrid, Spain.  
with W. Ouburg (Delta Lloyd and UvA) and M. Vellekoop (UvA)
- May 2015 **Two day training on Modeling and Validating mortality under Solvency II**, *European Actuarial Academy*, Stockholm, Sweden.  
with W. Ouburg (Delta Lloyd and UvA) and M. Vellekoop (UvA)
- 2013 - now **Leuven University Fund on Mortality Research**, *with the Institute of Actuaries Belgium*, Brussels, Belgium.  
General tasks: construction of a period and projected mortality table for the Belgian population, programming in R, implementing models from scientific literature, reporting, presenting. Within this fund I was lead researcher to produce a new stochastic mortality projection model for the Belgian population, published by the Institute of Actuaries as a best practice for the industry.
- 2011 - 2014 **Member of the *Werkgroep Prognosetafel***, *Actuariële Genootschap*, Utrecht, The Netherlands.  
General tasks: construction of a period and projected mortality table for the Dutch population. Personal duties: programming in R, implementing models from scientific literature, reporting.
- Academic**
- 2015 - now **Co-founder and member of LRisk: the Leuven Research Centre on Financial and Insurance Risk Analysis**, *LRisk*, KU Leuven, Belgium.
- 2015 - now **Website content and design**, *LRisk*, KU Leuven, Belgium.
- 2013 - now **Organizer**, *Career event in actuarial science*, *Faculty of Economics and Business in cooperation with Ekonomika*, KU Leuven, Belgium.
- 2012 - now **Member**, *Educational committee Master Programs*, *Faculty of Economics and Business*, KU Leuven, Belgium.
- 2011 - 2018 **Program Coordinator**, *Master in Insurance Studies*, KU Leuven, Belgium.
- 2012 & 2014 **Author & Coordinator**, *Application file Two year Master program in Insurance Studies for the Flemish government.*, KU Leuven, Belgium.  
Successful application in 2014, reviewed by international experts.
- 2011 **Author & Coordinator**, *Self assessment report and audit Master in Insurance Studies*, KU Leuven, Belgium.
- 2007 - 2014 **Member**, *Educational committee Actuarial Science, Econometrics and OR*, University of Amsterdam, The Netherlands.

## Program committees, conference organization, jury participation

- 2019 **Member of the scientific committee of Insurance Data Science Conference**, *ETH*, Zürich, Switzerland.  
With: Andreas Tsanakas, Patrick Cheridito, Guojun Gan, Markus Gesmann, Ioannis Kyriakou, Davide de March, Pauli Rämö, Ronald Richman, Jürg Schelldorfer, Giorgio Spedicato, Christophe Dutang, Mario Wütrich
- 2018 **Organizer of IA|BE Summer School on Reinsurance**, Leuven, Belgium.  
October 9 & 10.  
**Lead organizer**, *4th Conference of the European Actuarial Journal*, Leuven, Belgium.  
[www.eaj2018.org](http://www.eaj2018.org)
- Member of the scientific committee of Insurance Data Science Conference**, *Cass Business School*, London, UK.  
With: dr. Andreas Tsanakas, Markus Gesmann, dr. Giorgio Spedicato, dr. Christophe Dutang
- 2017 **Member of the scientific committee of R in insurance**, *ENSAE*, Paris, France.  
With: dr. Andreas Tsanakas, Markus Gesmann, dr. Giorgio Spedicato, dr. Christophe Dutang
- 2016 **Organizer of LRisk and IA|BE Summer School on Modeling, Estimation and Hedging of Longevity Risk**, Leuven, Belgium.  
With: Gerda Elsen, KU Leuven campus Brussel, August 25 & 26.
- 2016 **Member of the scientific committee of R in insurance**, *Cass Business School*, London, UK.  
With: dr. Andreas Tsanakas, Markus Gesmann, dr. Giorgio Spedicato, dr. Christophe Dutang

- 2015 **Member of the jury of the [Econometric Game](#), the world championship of econometrics, University of Amsterdam, Amsterdam, The Netherlands.**  
 With: prof. dr. Bas Werker (Tilburg University), prof. dr. Michel Vellekoop (University of Amsterdam), dr. Ramon van den Akker (Tilburg University and SNS Reaal)
- Member of the scientific and organizing committee of *R in insurance*, ([as lead organizer](#)), University of Amsterdam, Amsterdam, The Netherlands.**  
 With: dr. Andreas Tsanakas (Cass Business School), Markus Gesmann (Lloyd's London), prof. Jens Perch Nielsen (Cass Business School), dr. Christophe Dutang (LeMans University), prof. Michel Vellekoop (UvA), prof. Roger Laeven (UvA), June 29.
- Member of the program committee of *Rob in insurance*, University of Amsterdam, Amsterdam, The Netherlands.**  
 With: prof. Michel Vellekoop (UvA), prof. Roger Laeven (UvA), dr. Angela Van Heerwaarden (UvA), drs. Evelien Brink, June 30.
- Member of the scientific committee of *ASTIN 2015*, Sydney, Australia.**  
 With: prof. Piet de Jong (Macquarie), prof. Mario Wüthrich (ETH), prof. Richard Verrall (City University), prof. Enrique de Alba (ITAM, Mexico), prof. Jed Frees (University of Wisconsin in Madison), prof. Jackie Li (National University of Singapore)
- 2014 **Organizer of *IA|BE Summer School on Pricing and Hedging Insurance Liabilities in Incomplete Markets*, Leuven, Belgium.**  
 With: Gerda Elsen, HU Brussel, September 11 & 12.
- Member of the scientific committee of *R in insurance*, Cass Business School, London, UK.**  
 With: dr. Andreas Tsanakas, Markus Gesmann, prof. Jens Perch Nielsen, dr. Christophe Dutang
- 2013 **Chair of the scientific committee of *ASTIN 2013*, The Hague, The Netherlands.**  
 With: Michiel van der Wardt, prof. Montserrat Guillen, prof. Anja de Waegenare, prof. Antoon Pelsser, Dennis Dannenburg, Peter ter Berg, Angela van Heerwaarden, Eveline Bos
- 2012 **Organizer of *IA|BE Summer School on Valuation of Contingent Claims*, Leuven, Belgium.**  
 With: Gerda Elsen, HU Brussel, September 20 & 21.
- 2011 **Organizer of *IA|BE Summer School on Enterprise Risk Measurement*, Leuven, Belgium.**  
 With: Gerda Elsen, HU Brussel, September 8 & 9.

## Teaching experience

I have a broad teaching experience at Bachelor, Master and Executive Master level, including:

- Data Science for Non Life Insurance (6 erts, KU Leuven);
- Insurance Analytics (Amsterdam Business School);
- Advanced Non Life Insurance Mathematics (6 erts, KU Leuven);
- Advanced Life Insurance Mathematics (6 erts, KU Leuven);
- Non Life Insurance or Loss Models (6 erts, KU Leuven);
- Life Insurance Mathematics (6 erts, University of Amsterdam);
- Statistics for Actuarial Science (6 erts, KU Leuven);
- Probability Theory and Statistics (University of Amsterdam);
- Case on Loss reserving (Amsterdam Business School, Executive program in Actuarial Science);
- Case on Disability Insurance (Amsterdam Business School, Amsterdam Business School, Executive program in actuarial science).

Links to teaching evaluations of my courses:

- Life Insurance Mathematics, University of Amsterdam: evaluation [2016-2017](#), [2017-2018](#), [2018-2019](#), [2019-2020](#).
- Inleiding Levenactuarie: teaching evaluation [2013-2014](#), [2014-2015](#), [2015-2016](#), [2016-2017](#).
- Insurance Analytics, Amsterdam Business School: evaluation [2019](#).
- Data science in insurance, Aarhus Summer University: evaluation [2019](#).
- Lecture in the Postgraduaat Big Data and Analytics in Business and Management, KU Leuven: evaluation [October 2016](#).
- Advanced Non Life Insurance Mathematics: teaching evaluation [2012-2013](#), [2014-2015](#).



- Advanced Life Insurance Mathematics: teaching evaluation [2014-2015](#).
- Loss Models: teaching evaluation [2014-2015](#).

## Educational technology and teaching initiatives

- 2018 Development of online course on [Valuation of Life Insurance Products with R](#) on the DataCamp platform, with Roel Verbelen (at this moment: 2,736 registered users).
- 2015 *Introduction to actuarial mathematics for high school students* (as part of the *vrije ruimte wiskunde*), developed and taught with ir. Nora Van Breusegem, in cooperation with Mater Dei Institute in Leuven.

## Publications

### In international journals, with peer review

- (24) J. Crevecoeur, K. Antonio & R. Verbelen. 2019. Modelling the number of hidden events subject to observation delay. *European Journal of Operational Research*, 277(3), 930-944.
- (23) R. Verbelen, K. Antonio & G. Claeskens. 2018. Unravelling the predictive power of telematics data in car insurance pricing. *Journal of the Royal Statistical Society: Series C*, 67(5), 1275-1304.
- (22) R. Henckaerts, K. Antonio, M. Clijsters & R. Verbelen. A data driven binning strategy for the construction of insurance tariff classes. *Scandinavian Actuarial Journal*, accepted.
- (21) E. Stripling, S. vanden Broucke, K. Antonio, M. Snoeck & B. Baesens. 2018. Profit maximizing logistic model for customer churn prediction using genetic algorithms. *Swarm and Evolutionary Computation*, 40, 116-130
- (20) K. Antonio, S. Devriendt, W. de Boer, R. de Vries, A. De Waegenaere, H.K. Kan, E. Kromme, W. Ouburg, T. Schulteis, E. Slagter, M. van der Winden, C. Iersel & M.H. Vellekoop. 2017. Producing the Dutch and Belgian mortality projections: a stochastic multi-population standard. *European Actuarial Journal*, 7(2), 297-336.
- (19.) T. Reynkens, R. Verbelen, J. Beirlant & K. Antonio. 2017. Modelling censored losses using splicing: a global fit strategy with mixed Erlang and extreme value distributions. *Insurance: Mathematics and Economics*, 77, 65-77.
- (18.) F. Van Berkum, K. Antonio & M. Vellekoop. 2017. A Bayesian joint model for population and portfolio-specific mortality. *ASTIN Bulletin*, 47(3), 681-713.
- (17.) J. Dhaene, E. Godecharle, K. Antonio, M. Denuit & H. Hanbali. 2017. Lifelong health insurance covers with surrender values: updating mechanisms in the presence of medical inflation. *ASTIN Bulletin*, 47(3), 803-836.
- (16.) R. Verbelen, K. Antonio & G. Claeskens. 2016. Multivariate mixtures of Erlangs for density estimation under censoring. *Lifetime Data Analysis*, 22(3), 429-455.
- (15.) F. van Berkum, K. Antonio & M.H. Vellekoop. 2016. The impact of multiple structural changes on mortality predictions. *Scandinavian Actuarial Journal*, 2016:7, 581-603.
- (14.) E. Godecharle & K. Antonio. 2015. Reserving by conditioning on markers of individual claims: a case-study using historical simulation. *North American Actuarial Journal*, 19(4), 273-288.
- (13.) K. Antonio, A. Bardoutsos & W. Ouburg. Bayesian Poisson log-bilinear models for mortality projections with multiple populations. 2015. *European Actuarial Journal*, 5(2), 245-281.
- (12.) R. Verbelen, L. Gong, K. Antonio, A. Badescu & S. Lin. 2015. Fitting mixtures of Erlangs to censored and truncated data using the EM algorithm. *ASTIN Bulletin*, 45(3), 729-758.
- (11.) M. Pigeon, K. Antonio & M. Denuit. 2014. Individual loss reserving using paid-incurred data. *Insurance: Mathematics and Economics*, 58, 121-131.
- (10.) K. Antonio & H.J. Plat. 2014. Micro-level stochastic loss reserving in general insurance. *Scandinavian Actuarial Journal*, 7, 649-669.
- (9.) W. Vercruyssen, J. Dhaene, M. Denuit, E. Pitacco & K. Antonio. 2013. Premium indexing in lifelong health insurance. *Far East Journal of Mathematical Sciences, Special Volume 2013 (Part IV)*, 365-384.
- (8.) M. Pigeon, K. Antonio & M. Denuit. 2013. Individual loss reserving with the multivariate skew normal framework. *ASTIN Bulletin, The Journal of the International Actuarial Association*, 43(3), 399-428.

- (7.) K. Antonio & E.A. Valdez. 2012. Statistical concepts of a priori and a posteriori risk classification. *Advances in Statistical Analysis*, 96(2), 187-224.
- (6.) K. Antonio, E.W. Frees & E.A. Valdez. 2010. A multilevel analysis of intercompany claim counts. *ASTIN Bulletin, The Journal of the International Actuarial Association*, 40(1), 151-177.
- (5.) H. Van Calster, P. Endels, K. Antonio, K. Verheyen & M. Hermy. 2008. Coppice management effects on experimentally established populations of three herbaceous layer woodland species. *Biological conservation*, 141(10), 2641-2652.
- (4.) K. Antonio & J. Beirlant. 2008. Issues in claims reserving and credibility: a semiparametric approach with mixed models. *The Journal of Risk and Insurance*, 75(3), 643-676.
- (3.) K. Antonio & J. Beirlant. 2007. Actuarial statistics with generalized linear mixed models. *Insurance: Mathematics and Economics*, 40(1), 58-76.
- (2.) K. Antonio, J. Beirlant, T. Hoedemakers & R. Verlaak. 2006. Lognormal mixed models for reported claims reserves. *North American Actuarial Journal*, 10(1), 30-48.
- (1.) K. Antonio, J. Beirlant & T. Hoedemakers. 2005. Discussion on 'A Bayesian generalized linear model for the Bornhuetter-Ferguson method of claims reserving'. *North American Actuarial Journal*, 9(3), 143-145.

#### Research reports submitted for publication

- (8) M. Óskarsdóttir, W. Ahmed, K. Antonio, B. Baesens, R. Dendievel, T. Donas & T. Reynkens. Social network analytics for supervised fraud detection in insurance.
- (7) J. Crevecoeur & K. Antonio. A generalized reserving model: bridging the gap between pricing and individual reserving. <https://arxiv.org/abs/1910.12692>.
- (6) L. Deprez, K. Antonio & R. Boute. Pricing service maintenance contracts using predictive analytics.
- (5) R. Henckaerts, M.P. Côté, K. Antonio & R. Verbelen. Boosting insights in insurance tariff plans with tree-based machine learning methods. <https://arxiv.org/abs/1904.10890>. Support material is available online at <https://github.com/katrienantonio/distRforest> and <https://github.com/katrienantonio/sevtree>.
- (4) R. Verbelen, K. Antonio, J. Crevecoeur & G. Claeskens. Modeling the occurrence of events subject to a reporting delay via an EM algorithm. <https://arxiv.org/abs/1909.08336>.
- (3) F. van Berkum, K. Antonio & M. Vellekoop. Quantifying longevity gaps using micro-level lifetime data.
- (2) S. Devriendt, K. Antonio, T. Reynkens & R. Verbelen. Sparse regression with multi-type regularized feature modeling. <https://arxiv.org/abs/1810.03136>.
- (1) K. Antonio, E. Godecharle & R. Van Oirbeek. A multi-state approach and flexible payment distributions for micro-level reserving in general insurance. *AFI Research Report, AFI16106*.

#### Chapters in academic books, internationally recognized scientific publisher

- (4.) K. Antonio & Y. Zhang. 2014. *Mixed models*. Chapter 8 in Predictive Modeling Applications in Actuarial Science, Vol. 1 Predictive Modeling Techniques. (Editors E.W. Frees, R.A. Derrig, G. G. Meyers). Cambridge University Press, pages 266-312. (With peer review)
- (3.) K. Antonio & Y. Zhang. 2014. *Non-Linear Mixed models*. Chapter 16 in Predictive Modeling Applications in Actuarial Science, Vol. 1 Predictive Modeling Techniques. (Editors E.W. Frees, R.A. Derrig, G. G. Meyers). Cambridge University Press, pages 566-601. (With peer review)
- (2.) K. Antonio, P. Shi & F. van Berkum. 2014. *Longitudinal data and experience rating*. Chapter 14 in Computational Actuarial Science, with R (Editor A. Charpentier). Chapman & Hall/CRC Press, pages 513-544.
- (1.) K. Antonio & J. Beirlant. 2008. Risk classification in non-life insurance. *Encyclopedia of Quantitative Risk Assessment – Insurance/Actuarial Risks Section*. Wiley.

#### External reports

- (4.) K. Antonio & L. Devolder & S. Devriendt. 2015. The IA|BE 2014 mortality projection model for the Belgian population. Published by the *Institute of Actuaries in Belgium*.

- (3.) K. Antonio et al. 2014. Prognosetafel AG 2014. *Publicatie van het Actuarieel Genootschap - Actuarieel Instituut*.
- (2.) K. Antonio. 2012. Sluiten van de periodetafel GBM/V 2005-2010. *Actuarieel Genootschap - Actuarieel Instituut, extern rapport als bijlage bij 'Prognosetafel AG 2012-2062.'*
- (1.) K. Antonio et al. 2012. Prognosetafel AG 2012-2062. *Publicatie van het Actuarieel Genootschap - Actuarieel Instituut*.

#### In professional journals

- (10.) A. Charpentier & K. Antonio. La tarification par genre en assurance: corrélation ou causalité? *Risques*, 109, 107-110.
- (9.) K. Antonio & S. Devriendt. 2015. Lang leven in België: een nieuwe prognose. *CES - Leuvense Economische Standpunten*, LES 2015 151, 1-10 pp.
- (8.) R. Verbelen & K. Antonio. 2015. Loss modeling using mixtures of Erlangs. *De Actuaris*, 22(5), 42-44.
- (7.) K. Antonio & H.J. Plat. 2013. Stochastische schadereservering op microniveau. *50 jaar ASTIN. Verleden, heden en toekomst*, 28-31.
- (6.) K. Antonio & H.J. Plat. 2012. Schadereservering anders?: van driehoeken naar micro-data. *De Actuaris*, Juli 2012, 32-34.
- (5.) K. Antonio & H.J. Plat. 2010. A micro-model for IBNR and RBNS loss reserving. *Aenorm*.
- (4.) K. Antonio & H.J. Plat. 2010. A micro-model for IBNR and RBNS loss reserving. *The Actuary*, August 2010, 26-27.
- (3.) K. Antonio & D. Dannenburg. 2010. Credibiliteit 2.0. *De Actuaris*, Mei 2010, 32-35.
- (2.) K. Antonio. 2008. Statistical tools for non-life insurance. *Aenorm* 59, 5-9.
- (1.) K. Antonio, M.J. Goovaerts & T. Hoedemakers. 2004. On the distribution of discounted loss reserves. *Medium Econometrische Toepassingen* 12(3), 12-16.

#### Keynote lectures

- 2020 Keynote speaker *Insurance: Mathematics and Economics* conference, Montreal, July 6-8.
- 2019 Keynote speaker *Addicted to De-Risking seminar*, Lisbon School of Economics and Management, Universidade de Lisboa, November 12.
- 2018 Keynote speaker *Scientific day of the DGVFM*, Ulm, October 24-26.  
 Keynote speaker *Insurtech*, Postacademische vorming, KULAK, October 2.  
 Keynote speaker *Annual meeting of the Schweizerische Aktuarvereinigung*, Zurich, August 31.  
 Keynote speaker *Actuarial Research Conference*, University of Western-Ontario in London, Canada, August 9.  
 Keynote speaker *ASTIN Colloquium*, Berlin, Germany, June 4-6.  
 Keynote speaker *AfMath: the interplay between actuarial and financial mathematics*, Brussels, Belgium, February 8.
- 2017 Keynote speaker *5th R in Insurance conference*, ENSEA, Paris, June 8.  
 Keynote speaker *Scientific day of the DGVFM*, Berlin, April 26.  
 Keynote speaker *Workshop on pricing*, Quantact, Montreal, March 24.
- 2016 Keynote speaker *Leuven Statistics Days*, KU Leuven, Leuven, October 20.  
 Keynote speaker *Big Data, digitale innovatie en de gevolgen voor de verzekeringssector*, Amsterdam Center for Insurance Studies, Amsterdam, October 18.  
 Keynote speaker *3rd conference of the European Actuarial Journal*, ISFA Lyon, France, September 6-8.  
 Keynote speaker *Structured and Unstructured Data - Insurance Analytics, Products and Risk Management of the Future*, Deutsche Gesellschaft für Versicherungs- und Finanzmathematik, Hannover, Germany, June 16.

#### Seminars and Invited Talks

- 2019 *What actuaries do ... a selection of research lines.* Leergang aansprakelijkheidsrecht, Universiteit Antwerpen, Antwerpen, December 7.
- TBD.* Stockholms Universitet, Sweden, December 3.
- Insurance analytics: an academic perspective.* Postgraduaat big data and analytics for business, KU Leuven, Leuven, November 8.
- Individual claims reserving.* AG Insurance Risk and Actuary Seminar, Brussels, October 22.
- Social network analysis for insurance fraud detection.* Ageas pricing seminar, Brussels, October 8-10.
- Supervised learning with multi-type/level features.* Ageas pricing seminar, Brussels, October 8-10.
- Data analytics for claims reserving.* XpertSessie, Nationale Nederlanden, The Hague, March 19.
- 2018 *Tree-based machine learning for insurance pricing.* Ageas pricing seminar, Malaga, Spain, November 15.
- Insurance analytics: on risk factors in P&C pricing and telematics insurance.* Postgraduaat big data and analytics for business, KU Leuven, Leuven, October 19.
- On multilevel models in insurance analytics.* Retirement workshop for prof. Edward (Jed) Frees, Madison, Wisconsin, October 12-13.
- Research lines on mortality modeling.* Institute of Actuaries in Belgium, Brussels, June 12.
- Using risk factors in P&C insurance pricing. A data driven strategy with GAMs, regression trees and GLMs.* Conference Chairs Days, Paris, June 11.
- Unraveling relevant risk factors explaining pension fund mortality. A case study in the Netherlands.* Brown bag seminar AFI, KU Leuven, Leuven, May 3.
- Telematics insurance.* AG Insurance risk academy, Brussels, April 26.
- Spring school telematics insurance.* Koninklijk Actuariel Genootschap, Zeist, March 22.
- Insurance analytics: on risk factors in P&C pricing and telematics insurance.* Postgraduaat big data and analytics for business, KU Leuven, Leuven, February 23.
- What actuaries do ... a selection of research lines.* Leergang aansprakelijkheidsrecht, Universiteit Antwerpen, Antwerpen, January 16.
- 2017 *Risk factor selection and binning in insurance: data driven strategies* Ageas pricing seminar, Lisbon, Portugal, September.
- Unraveling the predictive power of telematics data in car insurance pricing.* Université de Lausanne, Lausanne, Switzerland, July 7.
- Unraveling the predictive power of telematics data in car insurance pricing.* Heriot Watt University, Edinburgh, June 22.
- Unraveling the predictive power of telematics data in car insurance pricing.* University of Amsterdam, Amsterdam.
- Unraveling the predictive power of telematics data in car insurance pricing.* New Perspectives in Transportation - Big Data Telematics towards Usage Based Insurance, Barcelona, May 4.
- Unraveling the predictive power of telematics data in car insurance pricing.* Scientific day of the DGVFM, Berlin, April 26.
- Recent developments in claims reserving.* Argenta, Antwerp, March 28 and 31.
- Unraveling the predictive power of telematics data in car insurance pricing.* Themadag Kring Schade: van data naar meer. Wageningen, the Netherlands, March 30.
- Unraveling the predictive power of telematics data in car insurance pricing.* Quantact pricing workshop, Concordia University, Montreal, March 24.
- Insuring cars: Risk drivers in an era of telematics and autonomous vehicles.* 3th Clinic European Financial Law, KU Leuven Campus Brussel, Brussels, March 3.
- 2016 *Using risk factors in general insurance pricing: a data driven strategy with GAMs, regression trees and GLMs.* Talk in the *Statistical modelling in insurance* (host: Vali Asimit, Cass Business School, City University, London) at CFE/ERCIM 2016, Technical University Sevilla, December 10.

- Actuaries and predictive modeling: past, present and future.* Covea Research Chair, Covea, Paris, November 28.
- Insurance analytics: past, present and future.* Postgraduaat Big Data, KU Leuven, October 21.
- A statistical modeling approach to pricing car insurance with telematics data.* Keynote talk during the Leuven Statistics Days, KU Leuven, October 20.
- Actuaries and predictive modeling: past, present and future.* ACIS symposium on Big Data, digitale innovatie en de gevolgen voor de verzekeringssector, Amsterdam, October 18.
- Unravelling the predictive power of telematics data in car insurance.* Ageas pricing seminar, Brussels, September 30.
- Using risk factors in general insurance pricing: a data driven strategy with GAMs, regression trees and GLMs.* Ageas CE workshop, Brussels, September 28.
- Actuaries and predictive modeling: past, present and future* 3rd European Actuarial Journal conference, Lyon, September 6.
- On mortality modeling and forecasting with multi-population data.* Risk and insurance seminar, UW Madison, August 2.
- 2015 *Micro-level stochastic loss reserving for general insurance: a multi-state approach with flexible payment distributions.* Talk in the *Econometric challenges in risk management* (host: prof. Laura Spierdijk, RUG) at CFE/ERCIM 2015, University College London (UK), December 12.
- Micro-level stochastic loss reserving for general insurance: a multi-state approach with flexible payment distributions.* Ageas CE workshop on reserving in general insurance, Brussels, December 9.
- A Bayesian joint model for population and portfolio specific mortality.* Brown bag seminar, KU Leuven, December 3.
- Micro-level stochastic loss reserving for general insurance: a multi-state approach with flexible payment distributions.* (host: prof. H.J. Albrecher) Université de Lausanne, Lausanne, Switzerland, October 31.
- Bayesian Poisson log-bilinear models for mortality projections with multiple populations.* Quantact research seminar, UQAM, Montreal, August 3.
- Micro-level loss reserving.* Seminar series in mathematical statistics, Stockholm University, Sweden, May 27.
- The AG2014 and IA|BE 2015 mortality projection models.* Guest lecture at RUG (host: prof. Laura Spierdijk), Groningen, March 18.
- The IA|BE 2015 mortality projection model.* Mortality forum IA|BE, Brussels, February 26.
- 2014 *The AG 2014 mortality projection model: a bridge between actuarial theory and practice.* Brown bag seminar, KU Leuven, November 27.
- Loss modelling with mixtures of Erlang distributions.* Workshop on risk management in insurance. Faculty of Economics and Business, University of Barcelona, July 16.
- Reserving methods for individual claim data.* (host: prof. A. Montanari) Statistics seminar, University of Bologna, June 5.
- Individual loss reserving using paid-incurred data.* Brown bag seminar, KU Leuven, April 3.
- Live long and prosper: actuaries and mortality forecasts.* Colloquium for the department of mathematics, KU Leuven, February 28.
- 2013 *Micro level stochastic loss reserving for general insurance.* Talk in the *actuarial statistics session* (host: prof. Tim Verdonck) at ERCIM 2013, University College London (UK), December 15.
- Stochastische schadereservering op microniveau. 50 jaar ASTIN. Verleden, heden en toekomst.* (with H.J. Plat), Celebrating 50 years of ASTIN The Netherlands, Soest, October 29.
- Individual loss reserving with the multivariate skew normal framework.* Talk in the *claims reserving session* (host: prof. Mario Wüthrich, ETH) at the Cramér Symposium in Insurance Mathematics, Stockholm University (Sweden), June 11-14.
- 2012 *Micro-level stochastic loss reserving.* Seminar at Cass Business School, City University (London), October 24.



- Micro-level stochastic loss reserving.* Statistics seminar, Department of Mathematics, KU Leuven, October 18.
- Stochastic loss reserving in non-life insurance.* Lecture in the framework of the KU Leuven Actuarial Contact Program (ACP), May 14.
- 2011 *A micro-model for stochastic loss reserving.* Workshop in actuarial science, University of Piraeus, Piraeus (Greece), October 14.
- An overview of stochastic mortality models.* Lecture at AG Insurance in the framework of the AG Insurance Chair on health insurance, Brussels, September 15.
- A micro-model for stochastic loss reserving.* Eurandom workshop on Actuarial and Financial Statistics, August 28.
- A multi-level analysis of intercompany claim counts.* Statistics Canada 2011, Montreal (Canada), July 3.
- Stochastic mortality models.* Lecture in the framework of the KU Leuven Actuarial Contact Program (ACP), June.
- 2010 *A micro-model for IBNR and RBNS loss reserving.* Invited seminar at Technical University of Lisbon, Lisbon (Portugal), September 16.
- A micro-model for IBNR and RBNS loss reserving.* University of Amsterdam, KAFEE Lunch Seminar, May 10.
- A micro-model for IBNR and RBNS loss reserving.* Invited seminar at University of Oldenburg, Mathematical Institute, Oldenburg (Germany), April 14.
- 2009 *Credibiliteit voor de hedendaagse schadeactuaris: een bruikbare interpretatie van een actuariële hoeksteen.* ASTIN day Dutch Actuarial Association, Amsterdam (The Netherlands), November 5.
- Claims reserving methods in insurance: from macro to micro Models.* Deutsche Aktuar Akademie (DAA) Workshop, Loccum (Germany), October 16.
- A hierarchical model for micro-level stochastic loss reserving.* University of Barcelona, Barcelona (Spain), October 1.
- 2008 *A multilevel analysis of intercompany data on claim counts.* University of Waterloo, Waterloo (Canada), December 2.
- A multilevel analysis of intercompany data on claim counts.* AFI (Accountancy-Finance-Insurance) department, KU Leuven, Leuven (Belgium), May 5.
- 2007 *Statistical tools for non-life insurance.* Centrum voor Verzekeringsstatistiek (Center for Insurance Statistics), The Hague (The Netherlands), November 21.
- Hierarchical modelling of multilevel claim statistics.* Workshop on Integrated Risk Modeling, Tilburg University, Tilburg (The Netherlands), April 12.
- 2006 *Hierarchical modelling of multilevel claim count statistics.* Mathematics and its Applications Seminar, University of Antwerp, Antwerp (Belgium), March 16.
- Hierarchical modelling of multilevel claim count statistics.* Statistics Seminar, Leuven (Belgium), December 15.
- Using mixed models in actuarial statistics.* 1st Statistical Day at KU Leuven, Leuven (Belgium), June 12.
- Recent developments in claims reserving.* School of Business, University of Wisconsin in Madison, Madison (USA), June 7.
- Actuarial statistics and mixed models: applications and opportunities.* Econometrics and Statistics Seminar, Tilburg University, Tilburg (The Netherlands), April 12.
- 2005 *Let's go Bayesian: an actuarial point of view.* Statistics Seminar, KU Leuven, Leuven (Belgium), November 25.
- Let's go Bayesian: an actuarial point of view.* 3rd Young Researchers Day, Université Catholique de Louvain-la-Neuve, Louvain-la-Neuve (Belgium), December 2.

## Announcements at National and International Conferences

- 2019 *Individual claims reserving with claim specific covariates.* by J. Crevecoeur, with K. Antonio, Insurance: Mathematics and Economics conference, Munchen, July 10-12.
- Regularization methods for multi-population mortality modeling.* by S. Devriendt, with K. Antonio and M. Vellekoop, Insurance: Mathematics and Economics conference, Munchen, July 10-12.
- Fraud detection in insurance with social network analytics.* by M. Óskarsdóttir, with K. Antonio, B. Baesens, T. Reynkens, Insurance: Mathematics and Economics, Munchen, July 10-12.
- Quantifying longevity gaps using micro-level lifetime data.* by F. Van Berkum, with K. Antonio and M. Vellekoop, Insurance: Mathematics and Economics, Munchen, July 10-12.
- Benchmark study on the use of tree-based machine learning for insurance pricing.* by R. Henckaerts, with K. Antonio and M.P. Côté, Insurance: Mathematics and Economics conference, Munchen, July 10-12.
- Individual claims reserving with claim specific covariates.* by J. Crevecoeur, with K. Antonio, Insurance data science conference, ETH Zurich, June 14.
- Fraud detection in insurance with social network analytics.* by M. Óskarsdóttir, with K. Antonio, B. Baesens, T. Reynkens, Insurance data science conference, ETH Zurich, June 14.
- 2018 *Modeling the future development of IBNR and RBNS claims in the presence of covariates.* CFE/ERCIM 2018, Pisa, December 16.
- Network-Based Fraud Detection in Vehicle Insurance using GOTCHA!* by T. Reynkens, with K. Antonio and B. Baesens, EAJ 2018, Leuven, September 11.
- Sparsity with Multi-Type Lasso Penalties* by S. Devriendt, with K. Antonio, T. Reynkens and R. Verbelen, EAJ 2018, Leuven, September 11.
- Tree-Based Machine Learning for Insurance Pricing* by R. Henckaerts, with K. Antonio, M.P. Côté and R. Verbelen, EAJ 2018, Leuven, September 11.
- A Time Change Strategy to Model Reporting Delay Dynamics in Claims Reserving.* EAJ 2018, Leuven, September 11.
- Unraveling Relevant Risk Factors Explaining Pension Fund Mortality: a Case Study in the Netherlands* by F. Van Berkum, with K. Antonio and M. Vellekoop, EAJ 2018, Leuven, 2018.
- Individual Reserving with Claim Specific Covariates* by J. Crevecoeur, with K. Antonio and R. Verbelen, EAJ 2018, Leuven, September 11.
- Sparsity with multi-type lasso penalties* by T. Reynkens, with S. Devriendt, K. Antonio and R. Verbelen, Insurance data science, Cass Business School, London, July 16.
- Tree-based machine learning for insurance pricing* by R. Henckaerts, with K. Antonio, M.P. Côté and R. Verbelen, 22nd Insurance: Mathematics and Economics conference, UNSW, Sydney, Australia, July 15-18.
- Tree-based machine learning for insurance pricing* by R. Henckaerts, with K. Antonio, M.P. Côté and R. Verbelen, useR! 2018, Brisbane, Australia, July 10-13.
- 2017 *A time change strategy to model reporting delay dynamics in claims reserving* by J. Crevecoeur, with K. Antonio and R. Verbelen, L2 Perspectives in actuarial science, insurance and risk theory, PhD workshop KU Leuven and Cass Business School, London, December 19.
- Sparse modeling of risk factors in insurance analytics* by S. Devriendt, with K. Antonio, T. Reynkens and R. Verbelen, L2 Perspectives in actuarial science, insurance and risk theory, PhD workshop KU Leuven and Cass Business School, London, December 19.
- A data driven strategy for the construction of tariff classes in P&C insurance* by R. Henckaerts, with K. Antonio, M. Clijsters and R. Verbelen, CFE/ERCIM 2017, Birkbeck and University of London, London, December.

- A time change strategy to model reporting delay dynamics in claims reserving* by J. Crevecoeur, with K. Antonio and R. Verbelen, CFE/ERCIM 2017, Birkbeck and University of London, London, December.
- Sparse modeling of risk factors in insurance analytics* by S. Devriendt, with K. Antonio, T. Reynkens and R. Verbelen, CFE/ERCIM 2017, Birkbeck and University of London, London, December.
- Using risk factors in insurance analytics data driven strategies* Chaire Dami workshop, UCLouvain, Louvain-la-Neuve, September 15.
- Modeling reporting delay dynamics for claims reserving* by J. Crevecoeur, with K. Antonio and R. Verbelen, 21st Insurance: Mathematics and Economics conference, TU Vienna, July 3-5.
- A computational framework for sparse modeling with different types of predictors* by S. Devriendt, with K. Antonio and R. Verbelen, Workshop on Sparsity in Applied Mathematics and Statistics, Brussels, June 1.
- Modelling reporting delay dynamics for claims reserving* by J. Crevecoeur, with K. Antonio and R. Verbelen, PARTY 2017, Switzerland, January 8-13.
- Using risk factors in P&C insurance pricing: a data driven strategy with GAMs, regression trees and GLMs.* by R. Henckaerts, with K. Antonio, M. Clijsters and R. Verbelen, PARTY 2017, Switzerland, January 8-13.
- Producing the Dutch and Belgian mortality projections: a stochastic multi-population standard.* by S. Devriendt, with K. Antonio, PARTY 2017, Switzerland, January 8-13.
- 2016 *Unravelling the predictive power of telematics data in car insurance pricing* by Roel Verbelen, with Katrien Antonio and Gerda Claeskens. Talk in the *Econometrics and statistics for financial risk management* (host: Katrien Antonio, KU Leuven and University of Amsterdam) at CFE/ERCIM 2016, Technical University Sevilla, December 11.
- Sparse modelling of risk factors for insurance analytics* by Sander Devriendt, with Katrien Antonio, Edward (Jed) Frees and Roel Verbelen. Talk in the *Econometrics and statistics for financial risk management* (host: Katrien Antonio, KU Leuven and University of Amsterdam) at CFE/ERCIM 2016, Technical University Sevilla, December 11.
- Global fits using splicing for censored data: mixed Erlang and extreme value distributions* by T. Reynkens, with R. Verbelen, J. Beirlant and K. Antonio, European Actuarial Journal Conference, Lyon, France.
- A statistical modeling approach for car insurance pricing with telematics data* by R. Verbelen, with K. Antonio, G. Claeskens. European Actuarial Journal Conference (EAJ 2016), Lyon, France.
- A statistical modeling approach for pricing car insurance with telematics data.* 51st Actuarial Research Conference. University of Minnesota and University of St. Thomas, Minneapolis (USA), July 27-30.
- A statistical modeling approach for pricing car insurance with telematics data.* 20th International Conference on Insurance: Mathematics and Economics. Georgia State University, Atlanta (USA), July 24-27.
- 2015 *Profit maximizing logistic regression modeling for customer churn prediction.* IEEE International Conference on Data Science and Advanced Analytics (DSAA' 2015). Paris (France), 19-21 October 2015. (Stripling, E. with vanden Broucke, S., Antonio, K., Baesens, B., Snoeck, M.)
- On the transferability of reserves in lifelong health insurance contracts.* ASTIN Colloquium. Sydney, Australia, 23-27 August 2015. (E. Godecharle with Dhaene, J., Antonio, K., Denuit, M.)
- Multivariate mixtures of Erlangs for density estimation under censoring and truncation.* International Biometric Society Channel Network Conference 2015 (IBS Channel 2015), Nijmegen (the Netherlands), 20-22 April 2015. (R. Verbelen with Antonio, K., Claeskens, G.)
- Modeling dependent losses under censoring and truncation using multivariate mixtures of Erlangs.* Actuarial Research Conference 2015 (ARC 2015), Toronto (Canada), 5-8 August 2015. (R. Verbelen with K. Antonio, G. Claeskens.)
- Bayesian Poisson log-bilinear models for mortality projections with multiple populations.* R in Insurance 2015, Amsterdam School of Economics, Amsterdam, The Netherlands, 29 June 2015. (Bardoutsos, A. with Antonio, K., Ouburg, W.)
- Multivariate mixtures of Erlangs for density estimation under censoring and truncation.* IBioStat, Hasselt (Belgium), 30 January 2015. (Verbelen, R. with Antonio, K., Claeskens, G.)

- Loss modelling using mixtures of Erlang distributions.* Actuarial and Financial Mathematics Conference (AFMathConf 2015), Brussels (Belgium), February 5-6. (R. Verbelen, with K. Antonio and G. Claeskens)
- Modeling dependent losses under censoring and truncation using multivariate mixtures of Erlangs.* Perspectives in Actuarial Risks in Talks of Young researchers (PARTY 2015), Liverpool, January 11-16. (R. Verbelen, with K. Antonio and G. Claeskens)
- Bayesian Poisson log-bilinear models for mortality projections with multiple populations.* Perspectives in Actuarial Risks in Talks of Young researchers (PARTY 2015), Liverpool, January 11-16. (A. Bardoutsos, with K. Antonio and W. Ouburg)
- Bayesian portfolio specific mortality.* Perspectives in Actuarial Risks in Talks of Young researchers (PARTY 2015), Liverpool, January 11-16. (F. Van Berkum, with K. Antonio and M.H. Vellekoop)
- 2014 *Modelling dependence under censoring and truncation using multivariate mixtures of Erlang distributions.* International Conference on Computational Statistics (COMPSTAT 2014), Geneva (Switzerland), August 19-22. (R. Verbelen, with K. Antonio and G. Claeskens)
- Loss modelling with mixtures of Erlang distributions.* European Actuarial Journal (EAJ) Conference, TU Vienna (Austria), September 10-12. (R. Verbelen, with K. Antonio and G. Claeskens)
- Modelling dependence under censoring and truncation using multivariate mixtures of Erlang distributions.* Meeting of the Belgian Statistical Society (BSS), Louvain-la-Neuve (Belgium), November 5-7. (R. Verbelen, with K. Antonio and G. Claeskens)
- Loss modeling with mixtures of Erlang distributions.* R in insurance, Cass Business School, London, July 14. (R. Verbelen, with K. Antonio)
- Reserving by conditioning on markers of individual claims: a case study using historical simulation.* R in insurance, Cass Business School, London, July 14. (E. Godecharle, with K. Antonio)
- 2013 *Fitting mixtures of Erlangs to censored and truncated data using the EM algorithm.* Anniversary of LStat, Leuven (Belgium), December 13-14. (R. Verbelen, with K. Antonio)
- Individual loss reserving.* CAS Loss Reserve Seminar. Boston, September 15-17.
- Structural breaks in mortality rates, with an application to Dutch and Belgian data.* International Congress on Insurance: Mathematics and Economics. Copenhagen, July 1-3. (F. Van Berkum, with K. Antonio and M.H. Vellekoop)
- Revisiting Rosenlund's reserve by detailed conditioning method.* International Congress on Insurance: Mathematics and Economics. Copenhagen, Denmark, July 1-3. (E. Godecharle, with K. Antonio)
- Premium indexing in lifelong health insurance.* ASTIN Colloquium. The Hague, The Netherlands, May 21-24. (W. Vercruysse, with J. Dhaene, M. Denuit, E. Pitacco and K. Antonio)
- Individual claims reserving with the multivariate skew normal framework.* ASTIN Colloquium. The Hague, The Netherlands, May 21-24.
- Bayesian stochastic mortality models for two populations: A technical note on MCMC sampling.* Pan-Hellenic Statistics Conference. Piraeus, Greece, May 8-11. (A. Bardoutsos, with K. Antonio)
- 2012 *Structural breaks in mortality rates, with an application to Dutch and Belgian data.* Netspar Pension Day, Utrecht (The Netherlands), November 9. (F. Van Berkum, with K. Antonio and M.H. Vellekoop).
- 2010 *A Hierarchical Model for Micro-Level Stochastic Loss Reserving.* Actuarial and Financial Mathematics Conference, Brussels (Belgium), February 4.
- 2009 *A Hierarchical Model for Micro-Level Stochastic Loss Reserving.* 13th International Conference on Insurance: Mathematics and Economics, Istanbul (Turkey), May 28.
- 2007 *Hierarchical Modeling of Multilevel Claim Count Statistics.* 11th International Conference on Insurance: Mathematics and Economics, University of Piraeus (Greece), July 10.
- Hierarchical Modelling of Multilevel Claim Counts.* Workshop on Statistical Inference for Dependent Data, UHasselt, Hasselt (Belgium), April 26.
- 2006 *Dependence Modelling of Multilevel Claim Count Statistics.* 14th Annual Meeting of the Belgian Statistical Society, Houffalize (Belgium).
- Semiparametric Regression Models for Claims Reserving and Credibility: the Mixed Model Approach.* 10th International Congress on Insurance: Mathematics and Economics, Leuven (Belgium), July 18.

*Actuarial Statistics with GLMMs and GAMMs*. 4th Actuarial and Financial Mathematics Day, Brussels (Belgium), February 10.

- 2005 *Applications of Generalized Linear Mixed Models in Actuarial Statistics*. 9th International Congress on Insurance: Mathematics and Economics, Québec (Canada).
- 2004 *On the Use of Linear Mixed Models for Loss Reserving*. 8th International Congress on Insurance: Mathematics and Economics, Rome (Italy).

## Referee Activities

Referee work for *Applied Stochastic Models in Business and Industry* (2018), *Scandinavian Actuarial Journal* (2013-now), *Insurance: Mathematics and Economics* (2005-now), *ASTIN Bulletin* (2007-now), *Computational Statistics and Data Analysis* (2005-2006), *North American Actuarial Journal* (2008-now), *Life and Pensions Magazine* (2008), *National Science Foundation* (USA) (research proposals) (2009), *Annals of Actuarial Science* (2010).

## Teaching Experience (Complete list)

### Academic year 2019-2020

*Actuarial Practice Cycle: Case on insurance analytics* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with dr Bram Wouters) (course design, teaching, review of case work, feedback on case work)

*Data science for Non-Life Insurance* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Loss Models* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

*Life Insurance Mathematics* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (24h of teaching: lectures, coordination of TAs and Blackboard site)

MSc thesis Master in Actuarial and Financial Engineering, KU Leuven (coordinator)

*Promoter and work leader of the following projects*: Simon Gielis (MMaths), Laurien Demeyere (MAFE), Evert Van den Heuvel (MAFE), Jens Robben (MAFE), Adriaan Decq (MAFE), Ine Fransen (MAFE), Katrien Van Boven (MAFE), Marie Michaelides (MAFE), Bram Torfs (MFAE), Carmen Vandenbosch (MAFE), Lotte Muylaert (MFAE), Felix Sangers (UvA).

### Academic year 2018-2019

*Actuarial Practice Cycle: Case on disability insurance* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with MSc Niels van der Laan, Milliman and MSc Pieter Bultena, PwC) (course design, teaching, review of case work, feedback on case work)

*Actuarial Practice Cycle: Case on insurance analytics* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with dr Bram Wouters) (course design, teaching, review of case work, feedback on case work)

*Data science for Non-Life Insurance* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Loss Models* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

*Life Insurance Mathematics* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (24h of teaching: lectures, coordination of TAs and Blackboard site)



MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

MSc thesis Master in Actuarial and Financial Engineering, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Bavo Decock (MStats), Bram Torfs (MFAE), Thomas Goeman (MFAE), Lotte Muylaert (MFAE), Marsha Mertens (MAFE), Sofie Vanoirbeek (MAFE), Elke Gagelmans (MAFE), Marie Michaelides (MAFE), Robyn van Basten (UvA), Didier Quintius (UvA), Felix Sangers (UvA), Youssef Achnine (UvA).

#### Academic year 2017-2018

*Actuarial Practice Cycle: Case on disability insurance* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with MSc Niels van der Laan, Milliman and MSc Pieter Bultena, PwC) (course design, teaching, review of case work, feedback on case work)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Loss Models* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

*Life Insurance Mathematics* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (24h of teaching: lectures, coordination of TAs and Blackboard site)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Bram Torfs (MVerz), Alexander France (MVerz), Hannes Huskic (MVerz), Lisa Van Gorp (MFAE), Marie Michaelides (BEng), Nathalie Hendrickx (MFAE), Robin Van Craen (MFAE), Myrthe Kellens (MVerz), Celine Oosterlinck (MVerz), Tine Huybrechts (MFAE), Maggie Westra (UvA), Jamie Kane (UvA).

#### Academic year 2016-2017

*Actuarial Practice Cycle: Case on disability insurance* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with MSc Wilbert Ouburg, Delta Lloyd and MSc Pieter Bultena, PwC) (course design, teaching, review of case work, feedback on case work)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Loss Models* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

*Inleiding Levenactuarialaat* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (24h of teaching: lectures, coordination of TAs and Blackboard site)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Myrthe Cras (MFAE), Liselotte Rens (MFAE), Bram Torfs (MVerz), Christophe Veyt (MVerz), Cedric Goovaerts (MVerz), Eugene Offerman (MVerz), Marc Van Houteghem (MVerz), Tine Huybrechts (MVerz), Nynke Gerards (UvA), Kerim Kes (UvA), Dylan Van Westen (UvA).

#### Academic year 2015-2016

*Non-Life Insurance* (Master in Insurance), University of Torino (10h lectures)

*Actuarial Practice Cycle: Case on disability insurance* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with MSc Wilbert Ouburg, Delta Lloyd and MSc Pieter Bultena, PwC) (course design, teaching, review of case work, feedback on case work)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Inleiding Levenactuarial* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (24h of teaching: lectures, coordination of TAs and Blackboard site)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

*Loss Models* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Myrthe Cras (MVerz), Liselotte Rens (MVerz), Bram Torfs (MVerz), Maarten Baeten (MVerz), Thomas Smits (MVerz), Olivier Vermassen (MFAE), Roel Henckaerts (MFAE), May Chung (UvA), Caroline Goedhart (UvA), Robert Kroon (UvA), Aart Valkhof (UvA), Martin Haringa (UvA), Nynke Gerards (UvA).

#### Academic year 2014-2015

*Non-Life Insurance* (Master in Insurance), University of Torino (10h lectures)

*Actuarial Practice Cycle: Case on loss reserving* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with Bart Kling, Towers Watson, Milliman, Addactis, Triple A, Posthuma Partners) (coordination, teaching)

*Actuarial Practice Cycle: Case on disability insurance* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with MSc Wilbert Ouburg, Delta Lloyd and MSc Christine de Haan, Delta Lloyd) (course design, teaching)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and exercise sessions)

*Inleiding Levenactuarial* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (72h of teaching: lectures, computer labs using MS Excel and exercise sessions)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

*Verzekeringen niet-leven* (6 ects, Master in Verzekeringen), KU Leuven (39h of teaching: lectures, exercises, computer demos)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Maxime Clijsters (MFAE), Hans Van Overloop (MFAE), Lieven Declercq (MFAE), Roeland Baeten (MVerz), Rachel Bonsel (UvA), Joost Michielsen (UvA), May Chung (UvA), Willeke de Tree (BSc, UvA), Cindy Brijs (BSc, UvA).

## Academic year 2013-2014

*Non-Life Insurance* (Master in Insurance), University of Torino (10h lectures)

*Actuarial Practice Cycle: Case on loss reserving* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with Towers Watson, Milliman, Actuaris (France), Posthuma Partners) (coordination, teaching)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (21h of teaching: lectures, computer labs using R and exercise sessions) (with dr. Leen Teunen)

*Inleiding Levenactuarial* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (72h of teaching: lectures, computer labs using MS Excel and exercise sessions)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Jasper Van Halewyck (UvA, MSc), Lianne Westinga (UvA, MSc), Vera Makhan (UvA, MSc), Wella Shindy (UvA, MSc), Rachel Bonsel (UvA, MSc), Dima Babykin (UvA, MSc), Raoul Lucas (UvA, MSc), Lennart Niezen (UvA, BSc), Robert Kroon (UvA, BSc), Toon Rogé (KU Leuven, MSc), Bruno De Laet (KU Leuven, MSc), Maxim Van Reybrouck & Piet Vanhuyse (KU Leuven, MSc), Jonas Deré (KU Leuven, MSc), Hans Van Overloop (KU Leuven, MSc), Lize Devolder (KU Leuven, MSc), Zoé Dressé (KU Leuven, MSc).

## Academic year 2012-2013

*Non-Life Insurance* (Master in Insurance), University of Torino (10h lectures)

*Actuarial Practice Cycle: Case on loss reserving* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with Towers Watson, Milliman, Actuaris (France), Posthuma Partners) (coordination, teaching)

*Advanced Non-Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 ects, Master in Financial and Actuarial Engineering), KU Leuven (21h of teaching: lectures, computer labs using R and exercise sessions) (with dr. Leen Teunen)

*Inleiding Levenactuarial* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (72h of teaching: lectures, computer labs using MS Excel and exercise sessions)

*Seminarie verzekeringen* (6 ects, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordinator)

MSc thesis Master in Verzekeringen, KU Leuven (coordinator)

*Promoter and work leader of the following projects:* Alexander Stolwijk (UvA, MSc), Wilbert Ouburg (UvA, MSc), Jasper Van Halewyck (UvA, MSc), Miriam Visser (UvA, MSc), Ibrahim Balci (UvA, MSc), Yorick Kuiper (UvA, BSc), Rachel Bonsel (UvA, BSc), Toon Rogé (KU Leuven, MSc), Bruno De Laet (KU Leuven, MSc), Lien Verpoorten (KU Leuven, MSc), Maxim Van Reybrouck & Piet Vanhuyse (KU Leuven, MSc), Siska De Pril & Laurence Verheye (KU Leuven, MSc), Marjolein Cooman (KU Leuven, MSc), Frederik Borgers (KU Leuven, MSc), Lise Ooms & Anne Boudewijns (KU Leuven, MSc), Jonas Deré (KU Leuven, MSc).

## Academic year 2011-2012

*Non-Life Insurance* (Master in Insurance), University of Torino (10h lectures)

*Inleiding Levenactuarial* (6 ects, Bachelor in Econometrics, Actuarial Science and Operations Research), University of Amsterdam (42h of teaching: lectures, computer labs using MS Excel and exercise sessions)

*Actuarial Practice Cycle: Case on loss reserving* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with Towers Watson, Milliman, Actuaris (France), Posthuma Partners, ASR, DNB) (coordination, teaching)

*Advanced Non-Life Insurance Mathematics* (6 erts, Master in Financial and Actuarial Engineering), KU Leuven (39h of teaching: lectures, computer labs using R and SAS and exercise sessions)

*Advanced Life Insurance Mathematics* (6 erts, Master in Financial and Actuarial Engineering), KU Leuven (21h of teaching: lectures, computer labs using R and exercise sessions) (with dr. Leen Teunen)

*Statistics for Finance and Insurance* (Master in Financial and Actuarial Engineering), KU Leuven (6h of teaching: lectures on extreme value statistics, substitute for dr. Tim Verdonck)

*Seminarie verzekeringen* (6 erts, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordination)

MSc thesis Master in Verzekeringen, KU Leuven (coordination)

*Promoter and work leader of the following projects:* Silke Philips & Carolien Peeters (KU Leuven, MSc), Veerle Trippaers & Ilse Munnikhof (KU Leuven, MSc), Laurence Verheye & Siska De Pril (KU Leuven, MSc), Karl De Brucker (KU Leuven, MSc), Hok-Kwan Kan (UvA, MSc), Saskia Das (UvA, MSc), Wilbert Ouburg (UvA, MSc), Miriam Visser (UvA, MSc), Jurjen Boog (UvA, MSc), Lianne Westinga (UvA, BSc), Jasper Kunst (UvA, BSc), Reinder Van Velze (UvA, BSc).

### Academic year 2010-2011

*Basis Actuarial 2* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (24h of teaching: lectures and exercise sessions)

*Basis Actuarial 1* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (with dr. Jan Bogers) (coordination, preparation of teaching material and exams, correction of exams)

*Levenactuarial 2* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (with prof. dr. M.H. Vellekoop and prof. dr. R. Kaas) (8h of teaching: lectures and exercise sessions)

*Actuarial Practice Cycle: Case on loss reserving* (Amsterdam Executive Master in Actuarial Science, Business School), University of Amsterdam (30h lectures, in cooperation with Towers Watson, Milliman, Actuaris (France), Posthuma Partners, ASR, DNB) (coordination, teaching)

*Schade 3 (AG18)* (2 groups with each 32h of lectures), Actuariel Instituut (AI), opleiding tot Actuaris AG, Utrecht (The Netherlands)

*Advanced Non-Life Insurance Mathematics* (6 erts, Master in Financial and Actuarial Engineering), KU Leuven (9h of teaching: lectures) (with prof. dr. Marc Goovaerts)

*Advanced Life Insurance Mathematics* (6 erts, Master in Financial and Actuarial Engineering), KU Leuven (30h of teaching: lectures, computer labs using R and exercise sessions)

*Seminarie verzekeringen* (6 erts, Master in Verzekeringen), KU Leuven (coordination, organizing guest lectures,...)

MSc thesis Master in Financial and Actuarial Engineering, KU Leuven (coordination)

MSc thesis Master in Verzekeringen, KU Leuven (coördination)

*Promoter and work leader of the following projects:* Sjoerd Brethouwer (UvA, BSc), Jord Brethouwer (UvA, BSc), Vera Makhan (UvA, BSc), Daniël Lintvelt (UvA, BSc), Allon Van der Heijden (UvA, BSc), Daniël Swanink (UvA, BSc), Paulien Van de Hoef (UvA, MSc), Benedicte Jong & Jan Bilsen (KU Leuven, MSc), Frederik Borgers (KU Leuven, MSc), Karl De Brucker (KU Leuven, MSc).

### Academic year 2009-2010

*Basis Actuarial 2* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (24h of teaching: lectures and exercise sessions)

*Basis Actuarial 1* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (coordination, preparation of teaching material and exams, correction of exams) (with dr. J. Bogers)

*Kansrekening en Statistiek 1* (6 erts, Bachelor in Actuarial Science, Econometrics and Operations Research), University of Amsterdam (30h of teaching: lectures, computer labs using Mathematica and exercise sessions)

*Kansrekening en Statistiek 2* (6 erts, Bachelor in Actuarial Science, Econometrics and Operations Research), University of Amsterdam (18h of teaching: computer labs using Mathematica and exercise sessions) (with dr. L. Seelen)

*Afstudeerseminar Bachelor Scriptie in Actuarial Science* (Bachelor in Actuarial Science), University of Amsterdam (coordination)

*Schade 3 (AG18)* (1 group, 32h of lectures), Actuariel Instituut (AI), opleiding tot Actuaris AG, Utrecht (The Netherlands)

*Statistics for Finance and Insurance* (6 erts, Master in Financial and Actuarial Engineering), KU Leuven (26h of teaching: lectures, computer labs using R), substitute for prof. dr. Jan Beirlant

*Promoter and work leader of the following projects:* Jolien Van der Beemt (UvA, BSc), Stef Flierman (UvA, BSc), Ronald Castenmiller (UvA, MSc), Frank Van Berkum (UvA, MSc)

#### Academic year 2008-2009

*Basis Actuarial Science 2* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (24h of teaching: lectures and exercise sessions)

*Basis Actuarial Science 1* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (coordination, preparation of teaching material and exams, correction of exams) (with drs. S. Leijssen)

*Kansrekening en Statistiek 1* (5 erts, Bachelor in Actuarial Science, Econometrics and Operations Research), University of Amsterdam (30h of teaching: lectures, computer labs using Mathematica and exercise sessions)

*Kansrekening en Statistiek 2* (5 erts, Bachelor in Actuarial Science, Econometrics and Operations Research), University of Amsterdam (18h of teaching: computer labs using Mathematica and exercise sessions) (with dr. L. Seelen)

*Schade 3 (AG18)* (1 group, 32h of lectures), Actuariel Instituut (AI), opleiding tot Actuaris AG, Utrecht (The Netherlands)

*Afstudeerseminar Bachelor Scriptie in Actuarial Science* (Bachelor in Actuarial Science), University of Amsterdam (coordination)

*Promoter and work leader of the following projects:* Jiske Rigter (UvA, MSc), Devon Meijlink (UvA, MSc), Karin Van Gelder (UvA, MSc), David Van Klaveren (UvA, MSc), Loes de Boer (UvA, MSc)

#### Academic year 2007-2008

*Basis Actuarial Science 2* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (24h of teaching: lectures and exercise sessions)

*Basis Actuarial Science 1* (5 erts, Bachelor in Actuarial Science), University of Amsterdam (coordination, preparation of teaching material and exams, correction of exams) (with drs. S. Leijssen)

*Kansrekening en Statistiek 3* (5 erts, Bachelor in Actuarial Science, Econometrics and Operations Research), University of Amsterdam (24h of teaching: lectures, computer labs using Mathematica and exercise sessions) (with prof. dr. C.G.H. Diks)

*Afstudeerseminar Bachelor Scriptie in Actuarial Science* (Bachelor in Actuarial Science), University of Amsterdam (coordination)

*Promotor and work leader of the following projects:* Nienke Kluft (UvA, MSc), Antien Kool (UvA, MSc), Stef Van Zijtveldt (UvA, BSc), Daan XXX (UvA, BSc)

#### Academic years 2003-2007

Exercise sessions and computer labs for the following courses: *Kansrekenen* (prof. J. Teugels), *Kansrekenen* (prof. I. Gijbels), *Statistical modeling of risk* (prof. J. Beirlant), *Statistics of extremes* (prof. J. Beirlant), *Practicum toegepaste wiskunde*, *Inleiding tot kansrekening en statistiek* (prof. J. Van Dyck & J. Beirlant), *Wiskundige statistiek* (prof. I. Gijbels), *Advanced Non-Life Insurance Mathematics* (prof. M. Goovaerts).

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## Skills

### Mathematical and Statistical Software Packages



Good knowledge of programming with R, SAS

Good knowledge of blogdown, bookdown, markdown, xaringan packages in R

Good knowledge of LaTeX.

### Languages

Dutch (mother tongue), English (fluent, oral and written) and French (fluent, oral and written).

### Interests and Hobbies

Music (e.g. Calexico, The War on Drugs, Ryan Adams, Wilco, Prince), reading, hiking, entertaining my boys.

Basketball player (forward/guard) from 1991-2010 with Basket Groot Willebroek, trainer/coach of a youth team in season 2003-2004, and trainer/coach on summer camps from 1999-2004.

Residence hall responsible for KU Leuven (Dienst Studentenhuisvesting): Arenberg (Cité) (2003-2004) and Pius X (2004-2006). Duties: communication with students and staff, organization of meetings and social activities, conflict management and guidance of international students.