Jens Robben

Naamsestraat 69, 3000 Leuven, Belgium

jens.robben@kuleuven.be | Personal website | LinkedIn

RESEARCH INTERESTS

In general: Actuarial Science, Data Science, Machine Learning, Applied Statistics

In particular: Life Insurance, Mortality Modelling, Non-Life Insurance, Reserving, Pricing

EDUCATION

PhD candidate in Insurance 2020 - Present
KU Leuven
Supervisor: Katrien Antonio

MSc in Actuarial and Financial Engineering - *Summa cum laude* 2019 - 2020
KU Leuven

MSc in Mathematics - *Summa cum laude* 2017 - 2019
KU Leuven

BSc in Mathematics - *Magna cum laude* 2014 - 2017
KU Leuven

VISITING POSITIONS

University of Amsterdam September 2023
Visiting scholar (*host: Torsten Kleinow*)

PUBLICATIONS

J. Crevecoeur, J. Robben & K. Antonio. 2022. A Hierarchical Reserving Model for Reported Non-Life Insurance Claims. *Insurance: Mathematics and Economics*, 104, 158-184.

J. Robben, K. Antonio & S. Devriendt. 2022. Assessing the Impact of the COVID-19 Shock on a Stochastic Multi-Population Mortality Model. *Risks*, 10(2), 26, 1-33.

WORKING PAPERS

J. Robben & K. Antonio (2023). Catastrophe Risk in a Stochastic Multi-Population Mortality Model. Revise and Resubmit at *Journal of Risk and Insurance.*

WORK IN PROGRESS

Relation Between Mortality Statistics and Climate and Environmental Variables at a Regional Level
with Katrien Antonio and Torsten Kleinow

The impact of environmental and climate-related variables on mortality rates has been a subject of significant interest in the literature. This research focuses on weekly death counts in European regions (NUTS3). We use the Serfling mortality model as a baseline model to explain mortality deviations from this baseline model using climate factors such as temperature, humidity, wind speed, and rainfall and environmental factors such as air pollutants PM10, PM2.5, O3 and NO2. We do this by means of a gradient boosting machine. We extract the climate variables from the gridded observational data set EOBS and the environmental factors from the Copernicus Atmosphere Monitoring Service (CAMS) gridded database. By leveraging this approach, we aim to discern the crucial factors influencing excess mortality and unravel potential interaction effects among these factors.

EXTERNAL REPORTS

K. Antonio, S. Devriendt, J. Robben & D. Sznajder. 2020. Assessing the impact of COVID-19 on the IA|BE 2020 mortality projections: a scenario analysis. *Published by the Institute of Actuaries in Belgium.*

K. Antonio, S. Devriendt & J. Robben. 2020. The IA|BE 2020 mortality projection model for the Belgian population. *Published by the Institute of Actuaries in Belgium.*

CONFERENCES & SEMINARS

2023	Modelling and Societal Impact of Longevity and Ageing Conference (Amsterdam), 26th International Congress on Insurance: Mathematics and Economics (Edinburgh), RCLR seminar (2023), Second Doctoral Seminar (Leuven)
2022	Insurance Data Science Conference (Milan), European Actuarial Journal Conference (Tartu), First Doctoral Seminar (Leuven).
2021	24th International Congress on Insurance: Mathematics and Economics (online)

TEACHING

Thesis supervisor of master students in the Master of Actuarial and Financial Engineering since 2020

Teaching assistant for the course "Loss Models" since 2020: responsible for giving the exercise sessions and developing/correcting three assignments.

AWARDS

AFI Master Thesis Award (2020)

REFEREE

Annals of Actuarial Science

SKILLS

Software: R, LaTeX, Python

Language: Dutch (native), English (fluent), French (basic)

BIO

Birth: September 7, 1996

Citizenship: Belgian

Hobbies: Running, Hiking

REFERENCES

Katrien Antonio
Professor in Actuarial Science
KU Leuven & Universiteit van Amsterdam
katrien.antonio@kuleuven.be
Personal website

Jan Dhaene
Professor in Actuarial Science
KU Leuven
jan.dhaene@kuleuven.be
Personal website

Torsten Kleinow
Professor in Actuarial Science
Universiteit van Amsterdam
t.kleinow@uva.nl
Personal website