

Jens Robben

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RESEARCH INTERESTS

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

In particular: Life Insurance, Mortality Modelling, Climate Risk, Non-Life Insurance, Reserving

EDUCATION

Postdoctoral researcher in Actuarial Science University of Amsterdam	2024 - Present
PhD candidate in Insurance KU Leuven Supervisor: Katrien Antonio	2020 - 2024
MSc in Actuarial and Financial Engineering - <i>Summa cum laude</i> KU Leuven	2019 - 2020
MSc in Mathematics - <i>Summa cum laude</i> KU Leuven	2017 - 2019
BSc in Mathematics - <i>Magna cum laude</i> KU Leuven	2014 - 2017

RESEARCH VISITS

University of Amsterdam Visiting scholar (<i>host: Torsten Kleinow</i>)	September 2023
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PUBLICATIONS

- J. Robben & K. Antonio (2024). [Catastrophe Risk in a Stochastic Multi-Population Mortality Model](#). *Journal of Risk and Insurance.*, 91, 599–651.
- 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. Barigou, & T. Kleinow (2025). [Granular mortality modeling with temperature and epidemic shocks: a three-state regime-switching approach](#). arXiv preprint arXiv:2503.04568.
- J. Robben, K. Antonio, & T. Kleinow (2024). [The short-term association between environmental variables and mortality: evidence from Europe](#). Under review in the *Journal of the Royal Statistical Society: Series A*.

WORK IN PROGRESS

Associating socio-economic, demographic, and environmental factors with mortality improvements: A cause-of-death study in Europe
with Séverine Arnold and Eman ElMeaddawy.

Demographic and socio-economic determinants of old-age mortality in Belgium and the Netherlands
with Torsten Kleinow.

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

- 2024 Longevity 19 (Amsterdam), Workshop “Climate Change and Insurance” (Vienna), Webinar for the International Actuarial Association - Life Section (online), 27th International Congress on Insurance: Mathematics and Economics (Chicago), KU Leuven, Bayes, and UvA PhD Workshop (Leuven)
- 2023 Longevity 18 (London), Modelling and Societal Impact of Longevity and Ageing Conference (Amsterdam), 26th International Congress on Insurance: Mathematics and Economics (Edinburgh), RCLR seminar (Amsterdam), Doctoral Seminar (Leuven)
- 2022 Insurance Data Science Conference (Milan), European Actuarial Journal Conference (Tartu), Doctoral Seminar (Leuven)
- 2021 24th International Congress on Insurance: Mathematics and Economics (online)

WORKSHOPS

- 2024 35th International Summer School of the Swiss Association of Actuaries, titled “Modelling and Quantifying Mortality and Longevity Risk”, with Katrien Antonio, Michel Vellekoop, Torsten Kleinow, and Frank van Berkum. I led three tutorial sessions and presented a lecture on the use of machine learning methods to extract insights from fine-grained mortality data.

TEACHING

University of Amsterdam: 2024-Present

Teaching assistant for the courses “Life Insurance Mathematics”, “Introduction Econometrics & Actuarial Science”, and “Introduction Data Science” in the Actuarial Science program

Thesis supervisor of bachelor and master students in the Actuarial Science program

KU Leuven: 2020-2024

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

Teaching assistant for the course “Loss Models”: responsible for giving the exercise sessions and constructing/correcting three assignments

AWARDS

AFI Master Thesis Award (2020)

REFEREE

Insurance: Mathematics and Economics, Scandinavian Actuarial Journal, 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

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Jan Dhaene

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