



Actuarial
Alumni & Friends
Leuven

Newsletter - May 2023

Dear Alumni and Friends,

with pleasure we bring you the latest edition of our newsletter. In this issue, we highlight some of the exciting developments that have taken place in our alumni organization over the past few months.

Firstly, we look back on our previous annual meeting, held on October 10th, 2022. It was a great success, with a fantastic turnout. We recap some of the highlights of the evening where we celebrated the past, present and future of our community and professional domain.

We are also thrilled to share that our alumni event, which honored the 10-year jubilee of our organization, has been featured in the professional news magazine *Verzekeringswereld* / *Monde d'assurance*.

As always, we are proud of the students in the actuarial and financial engineering program at KU Leuven. We provide a brief update on the registrations in the Master program.

Finally, we take a closer look at some of the current research topics and PhD students within the actuarial domain at KU Leuven. It is always inspiring to see the breadth and depth of knowledge being produced by our esteemed faculty and researchers.

We hope that you enjoy reading this edition of our newsletter and that it gives you a sense of the vibrancy and enthusiasm that characterizes our alumni organization.

Happy reading!

Katrien Antonio, Siska De Pril, Cedric Goovaerts and Katrien Goovaerts

Alumni & Friends News

A&F annual meeting - 10 October 2022

After a couple of quiet years, we were finally able to relaunch the organization of a new Alumni & Friends annual meeting on 10 October 2022. The event was co-organised by KU Leuven Research Center Insurance and took place in the Aula Emma Vorlat, located in KU Leuven Leercentrum Agora. The theme of the event was Resilience and relevance: frontline insights from the insurance industry - Sustainability & the insurance sector: a happily ever after? It was the perfect setting to celebrate the 10-year jubilee of our A&F community.

The event included two keynotes by Katrien De Cauwer from EY and Nele Vandaele from KBC Verzekeringen. The presentations provided valuable insights into the importance of sustainability and the role of actuaries and the insurance sector as a whole in achieving this goal. The highlights of the talk are nicely presented in *Verzekeringswereld* / *Monde d'assurance*. You can read the summary in [Dutch](#) or in [French](#).

In addition to the presentations, the event was also an opportunity to celebrate the newly honored Founding Fathers of the A&F organization, Dominique Beckers and Jan Dhaene. Both gentlemen were instrumental in establishing our community. Their efforts were greatly appreciated, and they were thanked for their tireless work in building and maintaining such a successful community.

Overall, the event was a testament to the resilience and relevance of the A&F community, and we look forward to many more successful years ahead.



From left to right: Katrien De Cauwer (EY), Nele Vandaele (KBC Verzekeringen), Dominique Beckers. Accompanied by some ambiance pictures of the evening.

Save the date - A&F Annual meeting - 10 October 2023

Save the date! Actuarial Alumni & Friends Leuven will be holding their next annual meeting on 10 October 2023. We invite all alumni, friends and guests to join us for an evening of learning, networking and celebrating. We look forward to seeing you there! More details will follow later.

News from our Alma Mater

Students in the Master Actuarial and Financial Engineering

In September, a new cohort of students officially began their studies in the Master of Actuarial and Financial Engineering program of KU Leuven. With a total of 38 newly registered students and 98 students in total, the English taught educational program is growing in popularity. Also, the proportion of international students is expanding and is currently at 45% (new, incoming students) and overall at 44%. These international students come from diverse backgrounds and bring with them a diversified wealth of knowledge and experience. 5 students are currently registered in the Dutch Master in Actuariële en Financiële Wetenschappen.

We wish all students the best in their academic journey and look forward to seeing their future contributions to the field of actuarial sciences.

PhD students and their research

Eva Verschueren

Eva Verschueren is working with Katrien Antonio and Wim Schoutens as doctoral researcher. Her research focuses on the interplay of quantitative finance and machine learning, and quantitative risk management tools for sustainable finance and insurance.

Jens Robben

Jens Robben is a doctoral researcher collaborating with Katrien Antonio. His research focuses on learning methods for stochastic mortality modeling and individual claims reserving.

Bavo Campo

Bavo Campo is a doctoral researcher under the supervision of Katrien Antonio. Bavo's research studies statistical and machine learning models for hierarchically structured and network data, with applications in fraud detection strategies and insurance pricing.

Lorenzo Marchi

Lorenzo Marchi is a doctoral researcher at the Faculty of Economics and Business at KU Leuven. He is jointly supervised by researchers from the University of Melbourne (Benjamin Avanzi, Rui Zhou) and KU Leuven (Antonio, Dhaene). Lorenzo works on fairness in insurance pricing systems.

Saeid Safarveisi

Saeid Safarveisi is working under the supervision of Jan Dhaene. His research projects span across a variety of valuation methodologies used for pricing Index-linked catastrophe loss instruments (e.g., Catastrophe (CAT) Bonds and Index Loss Warranties (ILWs)).

Freek Holvoet

As doctoral researcher, Freek Holvoet is under the supervision of Katrien Antonio. His research focuses on the use of neural networks for insurance pricing, interpretational tools for ML, and bridging academic research with in-practice methods from the insurance industry.

Biwen Ling

Biwen Ling is a doctoral researcher under the supervision of Jan Dhaene and Daniel Linders. Biwen has broad research interests, mainly in the intersection of quantitative finance and insurance and currently, her research topics are employing fair valuation in pricing different types of claims, in a multi-period setting.

Yves-Cédric Bauwelinckx

As doctoral researcher Yves-Cédric Bauwelinckx works under the supervision of Jan Dhaene and Tim Verdonck. His research interests are the use of machine learning models, more specifically generative models and causal machine learning, in the context of finance and insurance.

Churui Li

Churui Li is a doctoral researcher under the supervision of Jan Dhaene, Daniel Linders and Gertjan Verdickt. His research focuses on multivariate dependence modelling, comonotonicity, and herd behaviour in the stock market.

Source: [LRisk PhD students](#)

Paul Wilsens

Paul Wilsens is a doctoral researcher at the Faculty of Economics and Business of KU Leuven, jointly working with Katrien Antonio and Gerda Claeskens in the framework of an Excellence of Science research project. Paul works on using hierarchically structured features with regularization methods and autoencoders in neural networks.

Atibhav Chaudry

As graduate from the actuarial program at Melbourne University Atibhav Chaudry is visiting KU Leuven for 12 months to work with Jan Dhaene and Katrien Antonio. Atibhav is co-supervised by Benjamin Avanzi and Rui Zhou and works on dependence modelling for combined financial and actuarial risks.

Wentao Hu

Wentao Hu is a doctoral researcher under the supervision of Jan Dhaene. His research interests are on the theory and applications of decentralized risk sharing and Peer to Peer (P2P) insurance.

Workshop for the Icelandic actuarial association

On March 7 & 8, 2023 Katrien Antonio, Wilbert Ouburg (Nationale Nederlanden Life & Pensions) and Michel Vellekoop (UvA, Amsterdam) gave a workshop on Stochastic multi-population mortality models for life insurers and pension funds: calibration, scenario generation and the impact of COVID-19. The workshop was organized at Reykjavik University as a CPD initiative of the Icelandic actuarial association. Thanks to our Icelandic colleagues for the hospitality and unique experience!

Interested in the topic? A two day workshop in Amsterdam will be co-organized by Katrien Antonio, covering the Modelling and societal impact of longevity and ageing, see [here](#).

Inaugural lecture on Responsible actuarial learning

On April 20, 2023 Katrien Antonio officially accepted her promotion to part-time full professor at UvA (Amsterdam) by addressing her inaugural lecture entitled Responsible actuarial learning. Katrien will continue to combine this part-time position in Amsterdam with her work at KU Leuven. During the lecture she reflected on the field of actuarial statistics and the responsible use of data science methods to solve actuarial questions. A recording of the lecture can be watched [here](#).



From left to right: prof. Torsten Kleinow (UvA), prof. Katrien Antonio (UvA and KU Leuven), prof. Michel Vellekoop (UvA) and prof. Jan Dhaene (KU Leuven).

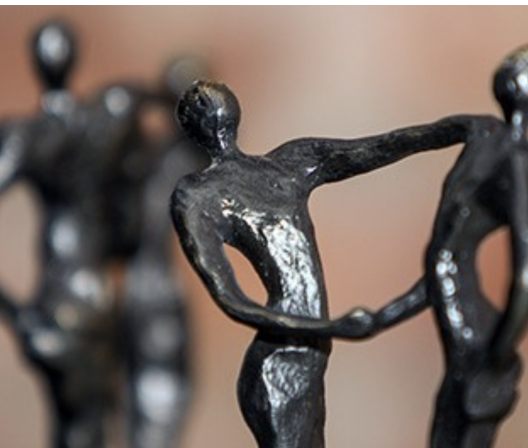
Award winning paper covered in the April 2023 edition of The Actuary

Each year since 1983, the editorial board of the North American Actuarial Journal awards an annual best paper award. The 2021 prize-winning article, “Boosting Insights in Insurance Tariff Plans with Tree-Based Machine Learning Methods,” is a collaboration between researchers from KU Leuven and Université de Laval. The paper was selected as the most relevant one from all articles published by NAAJ in 2021. Congratulations Roel Henckaerts, Marie-Pier Côté, Katrien Antonio and Roel Verbelen! Roel H. and Roel V. are graduates from the actuarial program at KU Leuven and members of our alumni association. Read the interview with the authors of the winning paper at:

[Prize-Winning Paper Tackles Machine Learning Actuarial Models](#)

Recent papers (a selection)

- Crevecoeur, Antonio, Desmedt & Masquelein (2023). Bridging the gap between pricing and reserving with an occurrence and development model for non-life insurance claims. Accepted for ASTIN Bulletin: the journal of the International Actuarial Association. See [here](#).
- Campo, B.D C., Antonio, K. (2023). Insurance pricing with hierarchically structured data: An illustration with a workers' compensation insurance portfolio. Scandinavian Actuarial Journal. doi: [10.1080/03461238.2022.2161413](https://doi.org/10.1080/03461238.2022.2161413)
- Hanbali, H., Linders, D., Dhaene, J. with Linders, D. (2023). Value-at-Risk, Tail Value-at-Risk and upper tail transform of the sum of two counter-monotonic random variables. SCANDINAVIAN ACTUARIAL JOURNAL, 2023 (3), 219-243. doi: [10.1080/03461238.2022.2092419](https://doi.org/10.1080/03461238.2022.2092419)
- Hanbali, H., Dhaene, J., Linders, D. with Hanbali, H. (2022). Dependence bounds for the difference of stop-loss payoffs on the difference of two random variables. INSURANCE MATHEMATICS & ECONOMICS, 107, 22-37. doi: [10.1016/j.insmatheco.2022.07.008](https://doi.org/10.1016/j.insmatheco.2022.07.008)
- Denuit, M., Dhaene, J., Robert, C.Y. with Robert, C.Y. (2022). Risk-sharing rules and their properties, with applications to peer-to-peer insurance. JOURNAL OF RISK AND INSURANCE, 89 (3), 615-667. doi: [10.1111/jori.12385](https://doi.org/10.1111/jori.12385)



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