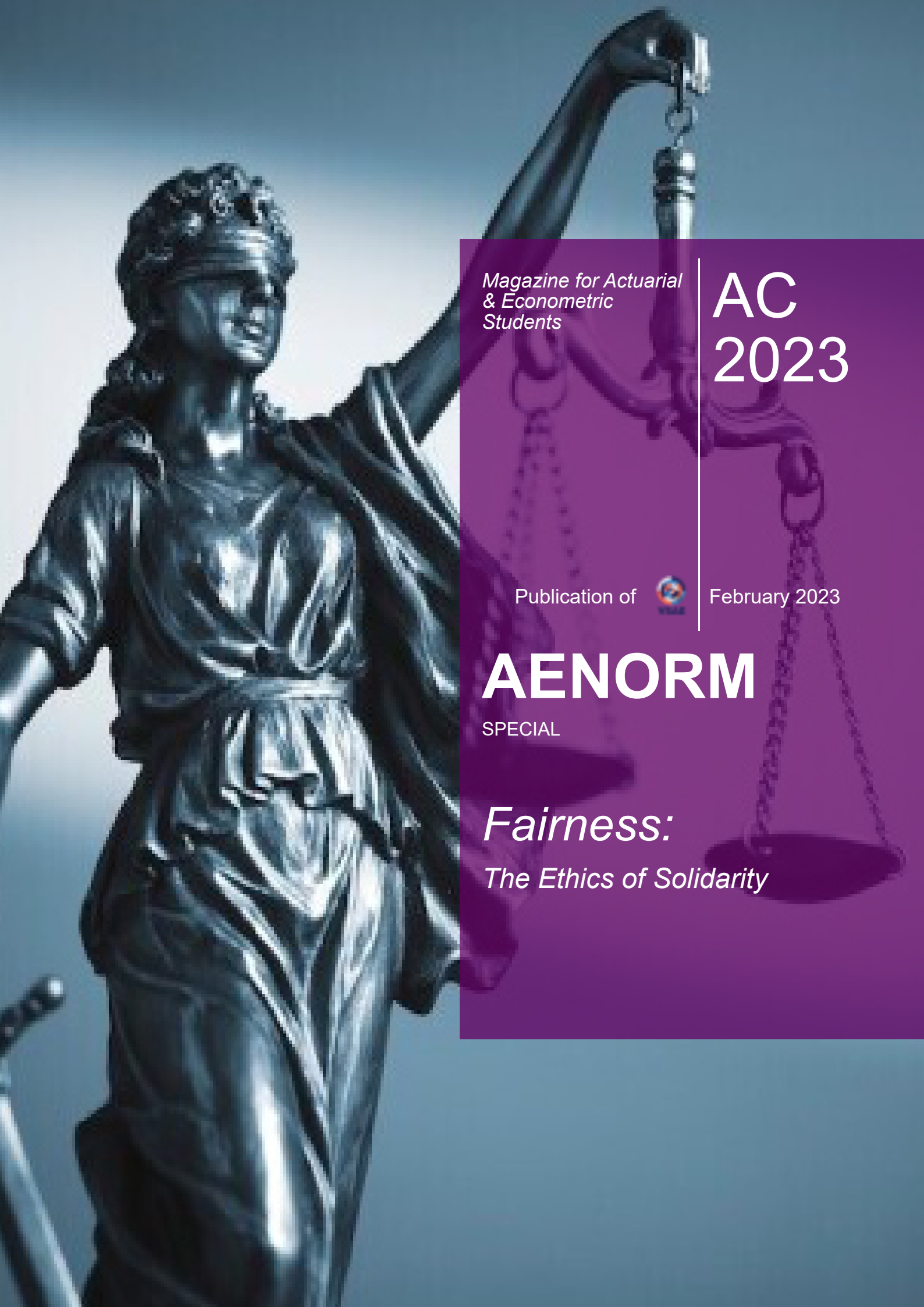


Magazine for Actuarial & Econometric Students

AC 2023

Publication of February 2023

AENORM

SPECIAL

Fairness:

The Ethics of Solidarity

a.s.r.
de nederlandse
verzekerings
maatschappij
voor alle
verzekeringen

a.s.r. doet het

Bij a.s.r. vinden we het belangrijk om een rol van betekenis te spelen in het verduurzamen van de samenleving. Bij alles wat we doen, denken we na over de vraag of dit houdbaar is voor de toekomst.

We zijn een duurzame verzekeraar op alle fronten: we beleggen verzekerings- en pensioenpremies duurzaam, we verzekeren groene daken en zonnepanelen, we bieden duurzame oplossingen, zoals duurzaam schadeherstel, we kijken pro-actief of we duurzaam opgewekte energie verzekerbaar kunnen maken en we dragen met onze oplossingen bij aan de duurzame inzetbaarheid van (werkend) Nederland. Zo willen we Nederland verzekeren van een goede toekomst. Voor de huidige generatie en voor de generaties na ons.

PREFACE

Dear reader,

We are proud to welcome you to this magazine concerning the Actuarial Congress 2023. The congress takes place the 1st of march in the KIT- Royal Tropical Institute.

This year, the conference theme is ‘Fairness: The Ethics of Solidarity’. As the field continues to evolve, it's more important than ever for actuaries to consider the ethical implications of their work. The conference will explore a wide range of topics related to this theme, including the ethical considerations of new technologies and the role of actuaries in shaping public policy. During both plenary and interactive sessions, you are challenged to both evaluate ethical problems on an abstract level as well as to critically examine your own ethical considerations.

To make this happen we have invited distinguished experts as our keynote speakers. The mixture of corporate representatives as well as governmental ones is core to address our theme in its full complexity. We are confident that their different insights and perspectives will be both informative and thought-provoking. As a committee, we are grateful to host this event and to see our work becoming reality.

In this magazine you get a preview of our speakers and the content of their session. We hope that you will enjoy reading about the conference and that it will inspire you to continue to learn and grow as an actuary. Besides this we can’t wait to welcome you the 1st of march to make this an unforgettable event together!

Kaj Soellaart, on behalf of the Actuarial Congress 2023 Committee.

COLOPHON

Editors
Dionne Pimentel & Jet van Ommeren

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This special edition of the Aenorm is distributed to all Actuarial and Econometrics students of the University of Amsterdam. The magazine is also distributed among alumni of the VSAE and members of the Actuarial Association.

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TABLE OF CONTENTS

DAY PROGRAM	PAGE 05
INTERVIEW WITH JEROEN BREEN	PAGE 06
PERSONALIZED PREMIUMS AND CONDITIONS: A CURSE OR A BLESSING?	PAGE 09
BECOMING AN ACTUARY: TO SPECIALIZE OR TO PROFESSIONALISE	PAGE 12
THE SPEAKERS	PAGE 16
THE VSAE	PAGE 26
THE COMMITTEE	PAGE 28

DAY PROGRAM

09:15 - 09:30	Beginning	Jeroen Breen
09:30 - 10:20	Plenary Session I	Puck Veeling & Louise Koopmans
10:20 - 11:10	Plenary Session II	Michel Vellekoop
11:10 - 11:35	Coffee Break	
11:35- 12:20	Interactive Session I	Marcel van Delft Erik-jan de Vries Mandy Luo
11:35 - 12:20	Student Session I	Pieter Tjerkstra & Gerjan Wienen
12:20 - 13:05	Lunch	
13:05 - 13:55	Plenary Session III	Rene Geerling
13:55 - 14:45	Plenary Session IV	Tjerrie Smit & Vincent van de Ven & Wessel van Zetten
14:45 - 15:10	Coffee Break	
15:10 - 15:55	Interactive Session II	Marc Heemskerk Leendert de Rijke Gilbert Pluym
15:10 - 15:55	Student Session II	Patrick Dannenburg & Melchior Mattens
16:00 - 16:45	Discussion Panel	
16:45 - 17:00	Closing	Jeroen Breen
17:00 - 18:00	Drinks	

JEROEN BREEN

INTERVIEW WITH THE CHAIRMAN

This year's Actuarial Congress will be supervised by Jeroen Breen. Jeroen Breen is a mathematician, actuary supervisor and lecturer at Avans, Industrial Engineering and Management. This interview will give you an introduction to this year's theme: Fairness - the Ethics of Solidarity.

In addition to Applied Mathematics at the TUE, Jeroen Breen studied Actuarial Sciences at the UVA and started his career in 1993 at the insurance group of a (relatively) small actuarial firm Dr WGJ Ten Pas; which was later acquired by Mercer. Worked mainly on the advisory and certification side of insurance companies and in the 1990s and early 2000s was very busy with absenteeism and disability. After a career in consulting, in 2011 Jeroen made the switch to the professional association of actuaries, the Royal Actuarial Society. Jeroen "has an opinion" about actuaries and is also trained in didactics, so a position as managing director responsible for the professional association and for the education to become an actuary was an appropriate next step. Jeroen has made the step to education since 2020 and works as a teacher of quantitative subjects at Avans University of Applied Sciences within the Industrial Engineering study program and is also still active as chairman of the supervisory board of Pensioenfonds Campina.

HOW DOES ETHICS PLAY A ROLE IN YOUR LIFE?

Ethics is an important part of my life for me. For me, acting ethics means acting on the basis of values and norms and also touches on integrity for me. As an actuary you also regularly have to deal with ethical issues; is it socially acceptable or not to develop a certain product? It may be possible from a risk perspective, but does it fit with your own values and norms. Would I still develop a product today where wealthy people receive a discount on term life insurance because they die less quickly on average? Maybe not, maybe I do. It also has to do with the zeitgeist. What might have been possible 30 years ago is no longer appropriate today. Another interesting (ethical) question is whether ethics can cost money and if so, who pays for it and are people willing to pay for it? Are we willing to pay more to avoid differentiating? I recently heard someone say that ethics is doing the right things the right way. But then what is good? “Good” is subjective. So I would like to add an element to that: doing the right things in the right way, which is acceptable to a broad group. For me, ethics also has to do with honesty; is it fair what you do and what you claim and as long as you can defend that - at least to yourself - you are acting responsibly in my opinion.

WHY IS THIS THEME RELEVANT FOR ACTUARIES?

The theme of Ethics is very relevant for actuaries because they are confronted with it on an almost daily basis. We are just not always aware of it. We should use that awareness more often more consciously. Everyone should read Cathy O'Neil's book: Weapons of Math Destruction. This book explains in great detail what the consequences of working with algorithms. That is where the role of the actuary comes in, in my opinion! We should do the calculations and provide insight into the impact of certain (ethical) choices more often and more prominently.

WHAT DO YOU THINK THE PARTICIPANTS WILL LEARN AT THE CONGRESS

I hope that the participants will go home after the congress with a backpack full of relevant examples where ethics and honesty play a role. I hope that this congress will contribute to awareness and that we will no longer take many things for granted.

What do you hope to learn from the congress?

In the past year we have been preparing for this congress and for me the theme has come to life more and more. It was already quite an important theme for me, but I noticed that I was less aware of it and because of the preparations and also because of the congress, I expect it to be at the top of my priorities again.

DID YOU EVER FACE AN ATHICAL DILEMMA IN THE WORKPLACE?

Yes, of course! When I was general director of the Royal Actuarial Society, I was regularly called - in confidence - by members who were confronted with ethical dilemmas in business and wanted sounding boards on how to deal with this based on the code of conduct of actuaries! These are often quite difficult matters, because it also has to do with your “circle of influence”. What role can you play when you stand your ground, but on the other hand, what do you do if it could cost you your job?

WITH RESPECT TO ETHICS, WHERE DO YOU THINK THERE IS THE MOST ROOM FOR IMPROVEMENT IN THE ACTUARIAL FIELD?

Into awareness! We do 95% of what we do unconsciously and automatically! As far as I'm concerned, just like with the theme of sustainability or ESG, we will have to put on the "glasses of ethics" in all our work before you deliver anything and I think we're going one step further by adding an "Ethical considerations" chapter as standard to any report or report produced by an actuary.



Deloitte.

What impact will *you* make?

Je wilt een baan met impact. Bij een werkgever waar jij het verschil kunt maken. Deloitte is zo'n werkgever. Met meer dan 6.500 mensen in 15 kantoren in heel Nederland is Deloitte een van de grootste professionele dienstverleners op het gebied van accountancy, belasting- en juridisch advies, consultancy, risk management en financiële advisering. Wij kunnen dit alleen als de beste mensen voor ons kiezen. Studenten met een brede blik, die in multidisciplinaire teams werken aan uitdagende opdrachten en daardoor hun kennis en ervaring verrijken. We streven om met verschillende activiteiten een zo groot mogelijke maatschappelijke impact te hebben. Let's connect for impact.

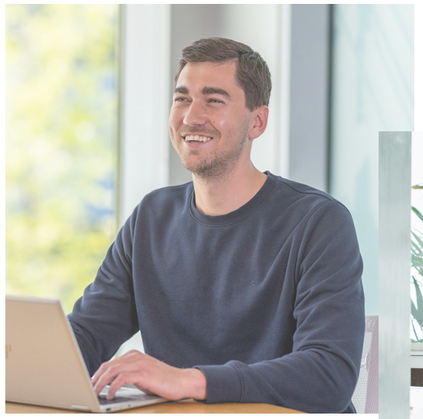
Blijf groeien
Bij Deloitte leer je iedere dag. Of je je nu ontwikkelt door het complexe werk dat je doet, of via de mensen met wie je samenwerkt. We helpen je om je ambities op jouw manier te realiseren, waar je toekomst ook ligt.

Durf jezelf te zijn
Wij willen jou. De ware jij, met je eigen sterke punten, blik op de wereld en persoonlijkheid. Zo creëren we een omgeving waarin iedereen erbij hoort, wordt gesteund en gehoord, en in staat is om een waardevolle, persoonlijke bijdrage te leveren.

Ontdek jouw purpose
Impact maken is meer dan alleen wat we doen: het hoort bij ons. We zijn gedreven om vooruitgang te boeken voor onze klanten, mensen en de samenleving. Dit gevoel wordt gedeeld door al onze collega's. Het maakt ons trots.

"Bij Deloitte kan iedereen zichzelf ontwikkelen tot een persoon die binnen elk type organisatie van waarde is."

Lees het hele verhaal





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Ontdek onze vacatures

PERSONALIZED PREMIUMS AND CONDITIONS: A CURSE OR A BLESSING?

A nurse drives through the center of Amsterdam to work at night. The insurer measuring her driving behavior knows that this is a risky ride: on some of the intersections which she has to cross, it is common for accidents to happen between 2 and 5 a.m. Therefore the nurse pays a storage fee on her car

Insures are increasingly able to differentiate premiums between individuals. In the fictionals example that was just given two pricing techniques are used. Firstly there is measuring behavior: risky behavior, in the actuarial sense of the word, leads to a higher premium than risk averse behavior. Secondly there is a 'loyalty penalty'. Because the insurer knows that the nurse probably won't switch to another company she pays a higher premium than other customers who are known to critically compare different insurers. So the insurer pays double storage.

DIFFERENTIATION IN PRACTICE

This example is not entirely fictional. The Financial Conduct Authority and the Central Bank of Ireland have shown in recent years that insurers in the United Kingdom and Ireland were able to determine for each customer how likely they were to switch on prolongation, based on a treasure of data. The customers that probably would not switch got faced with the highest premium increases. The money earned was then used to lure new customers with low premiums- premiums so low that competing insurers felt compelled to introduce a loyalty penalty as well. They saw no other way to compete with the discount rates. In the meantime, the FCA has taken measures to stop these pricing techniques.

Closer to home, we have seen the introduction of insurance policies in which behavior influences the premium in recent years. Measuring driving behavior is a well-known example, insurers in the Netherlands currently only look at how you drive, but not at where and when you drive. However, the latter is already established practice in America. Measuring lifestyle in exchange for premium discounts has also been introduced in the Netherlands, for example by reading the pedometer on the smartphone or measuring blood pressure.

The application of pricing techniques abroad and the results of discussions with Dutch insurers prompted the AFM to launch an exploratory study into the use of personalized pricing in the Dutch insurance sector. Based on literature research and interviews with market parties, scientists and foreign supervisors, the AFM published a report on this in June 2021, in which we set out the opportunities, risks and points that need attention.

LOOK AT THE OPPORTUNITIES

One of the benefits of personalized pricing is that risky behavior is no longer "subsidized" by risk averse behavior. When premiums are set at group level, it is unavoidable that motorists with exemplary driving behavior help pay for the claims of their riskier road users. Personalized pricing can therefore be perceived as fairer and moreover offer an incentive to take fewer risks. This can lead to lower claims costs for the insurer, lower insurance premiums for the consumer, and lower social costs, for example when healthcare costs decrease.

Personalized pricing can also increase the insurability of individuals. Consider, for example, taxi drivers who threaten to become uninsurable as an entire professional group. Measuring driving behavior can ensure that safe-driving taxi drivers can take car insurance again, without being disadvantaged by their colleagues with the more risky driving behavior.

ARTICLE

... BUT BE ALERT TO THE RISKS

The downside, however, is that every step towards personalized pricing leads to a slight decrease in solidarity. In some cases, we as a society may not find this objectionable, for example when a deliberately risky driver pays a higher premium. However, it is also possible that insurers can identify at an individual level whether a customer will be loss-making and then reject this customer based on that knowledge. This means that insurers with a less personalized acceptance policy will take on relatively more loss-making risks, which will give them an incentive to also do more individual risk assessment, or to increase premiums.

Such a development will make sharing data less voluntary. There will be consumers who do not want to share behavioral data with their insurer for privacy reasons. These consumers could be faced with higher premiums if the insurer views the refusal to share data as a greater risk of harm, rather than a need for privacy. Only wealthy citizens would then be financially able to maintain their privacy.

Insurers can personalize their premiums, but they can do the same with the policy conditions. It is technically possible to draw up a personalized set of conditions for each consumer. This could be done in the customer's interest: if the insurer knows that a certain age group is more often confronted with theft of luggage, the cover could be expanded. But the coverage could also be reduced, for example when someone visits the insurer's website with a high zoom function, which suggests that the person in question wears (or should wear) glasses. The question is whether a consumer would notice this: after all, the terms and conditions are tailor-made and cannot be compared in advance.

The increasing personalization of price and/or conditions also leads to a decrease in the comparability of insurance products. This already occurs when behavior influences the premium, but if the policy conditions were also personalized, this would mean the end of the comparability of insurance products in the Netherlands.

OBSERVE THE POINTS OF CONSIDERATION

Focussed on the opportunities and risks, the AFM has drawn up nine points for attention when using personalized pricing. For example, as a regulator, we find it undesirable if consumers were obliged to share their behavioral data. We also see it as the responsibility of the insurance sector as a whole to keep risks insurable. Part of that is not to discriminate based on factors beyond an individual's control, such as their genetic profile. Above all, insurers must carefully weigh the short and long term against each other: the advantages of personalized pricing are immediately clear in the short term (such as less subsidization and a possibly lower cost of claims), while the risks (such as uninsurability) will only manifest in the longer term.

CORE IS ETHICS

Back to the nurse: is it desirable or fair that she pays a higher premium for the nightly journeys to work? As a regulator, we would have our opinions about this, but insurers will also have to think about the larger ethical considerations that underlie this. The AFM closely monitors premium setting developments and can intervene in the event of abuses, based, among other things, on the standards for product development. The underlying question is whether the interests of the customer have been balanced in product development. For example, if loyal customers pay a higher premium than the more critical customers, there is little chance that the customer's interests have been balanced.

One aspect in the use of technology is perhaps even more important than laws and regulations: the ethical awareness of insurers. As digitization increases, new ethical issues will arise that have not yet been included in the AFM's exploration, or that have not yet been dealt with by the legislator. Many questions about premiums cannot be answered with a simple 'Yes' or 'No'.

Digitization is increasingly making the actuarial profession an interplay of ethical considerations, advantages and disadvantages and the short term versus the long term. Considerations that touch on essential products for consumers. And that makes one actuarial task more important than ever in this insurance era: navigating your own moral compass. Because we can only reap the benefits of digitization if we take ethics into account.

AUTHORS



Rene Geerling & Bart Zwartjes



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BECOMING AN ACTUARY: TO SPECIALIZE OR TO PROFESSIONALISE?

INTRODUCTION

In my academic job I often struggle with ethical issues. Is it unfair to be more strict with one student than with another? Can I quickly decide on an exemption when I formally should consult that critical colleague? How can I properly monitor the course quality when I am not a specialist on the course topics? Is it allowed to spread the word that the UvA produces the best-trained actuaries?

Phew… the latter issue is in fact my true conviction, but the ethical question is whether I can state it without having made a fully objective comparison? Fortunately, also being a practitioner actuary, I am used to handling ethical issues like every well-trained actuary. I would like to explain what you can do with our UvA actuarial programme, which is of course first in class both in terms of specialization and of professionalization.

SPECIALIST OR PROFESSIONAL?

Our academic training can only be and remain top quality if the academic team engages in both high-level research and in the needs of the professional field. Both are happening at the UvA. Examples of current practocal applications are the participation in the AG's Survival Tables committee and the Parameters committee for the new Dutch Pensions Act.

The MSc in Actuarial Science and Mathematical Finance offers specialized courses in actuarial science, mathematical finance and quantitative risk management. The course list shows recent developments in machine learning, climate change and finance and risk management: students can specialize in various disciplines. But on the other hand, to become a successful professional actuary, you might prefer to have practical knowledge of insurance, pensions and finance business and regulations, as well as additional professional competencies (like professional ethics!). What does it require to be a certifying pension-fund actuary or an Actuarial Function holder?

For that purpose the UvA offers a professional postmaster Actuarial Practice Cycle (APC) as a supplement to the academic BSc and MSc programs. This program aims at practical knowledge and professional competencies. Students can enroll as a part of our AEMAS program, and this total package is accredited by the Dutch actuarial profession (KAG). So our alumni may use the title “AAG”.

BECOMING A PROFESSIONAL ACTUARY IN AMSTERDAM

The postmaster APC aims at different student groups: not only the ‘UvA actuarials’ but also econometricians and other quants who are interested in actuarial jobs, as well as international students in quantitative fields. How do we transform all these different species into fully qualified actuaries? By offering part-time trajectory’s parallel to our BSc and Msc programs.

We have recently renewed the setup into a clear layer structure:

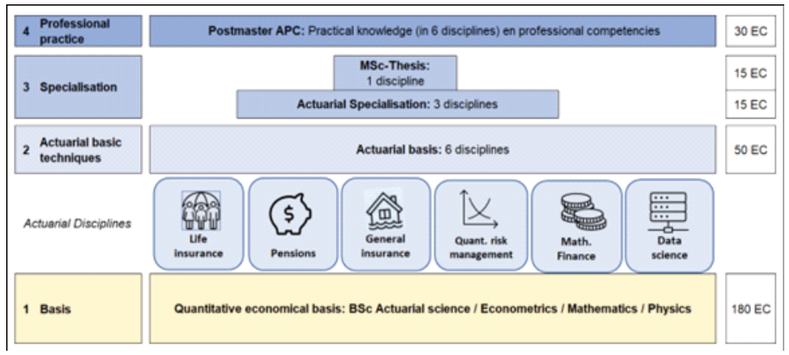
1.Basis: quantitative Bachelor's degree, supplemented where necessary with probability theory & statistics.

2.Actuarial basic techniques: 6 disciplines, with a total of 6 BSc courses and 4 MSc courses.

3.Specialization: 3 courses from 3 different disciplines, plus the MSc thesis in one of these 3 areas.

4.Professional and practical knowledge and key professional competences.
Qualified econometricians or other quants can study parttime In our AEMAS trajectory to add disciplines they still mess. A typical financial econometrician would be sufficiently specialized in Finance and Quantitative risk management, but would need to catch up on basic knowledge in the disciplines life insurance, pensions and non-life insurance.

Important: we use this profile for everyone who wants to be admitted to the postmaster APC, including regular UvA students. Did you complete both the BSc Actuarial Science and the MSc Actuarial Science & Mathematical Finance, then in most cases you will be instantly allowed to start in the APC.



BECOMING A COMPETENT ACTUARY WITH THE APC

You may wonder, since the financial sector is craving for quantitative professionals, what would be the added value for you to become a qualified AAG-actuary? Read the sequel to find out the answer: the postmaster APC will certainly add value to your career.

The postmaster APC is a one-year part-time course (every Tuesday from 15:00-21:30) filled with interesting practical cases taken from the work field of many actuaries. You work in a project team to acquire the necessary knowledge, check laws and regulations, and find out how to carry out the assignment. You also get training in professional competences, such as cooperation skills, presentation skills, conversation skills, ethics and professional judgment.

Let’s check out on that bit of ethics and judgment. In the educational requirements of the KAG they are listed under competences with regard to skills and attitude:

- **Integrity**:
  Holds others accountable for their own actions, monitors the fair handling of information and the personal value of others in teams and is a visible example in this regard.
- **Professional judgement:**
  In assessments takes all relevant aspects into account. Is open to arguments from different angles and disciplines. Independently draws a conclusion that he can defend well.

In the APC we start with a specialized ethics-trainer to train you. Afterwards you need to select two examples from your own work practice, describe them and analyse your behaviour in your individual competence workbook. You receive feedback in a private discussion with your mentor. Then it is time for practising: this is built into the case on Pension fund certification, where you and your team are responsible for assessing the annual accounts of a pension fund. This will certainly present challenges, but the teacher (a specialized actuary of course!) will guide you in maintaining independence and straight back and in dealing with the pressure you will receive from the pension fund board. Finally, you will experience the importance of your professional judgment as a certifying actuary when you have to defend it during a panel session with real pension fund experts.

In short, the APC offers a unique opportunity to learn from specialist teachers and to strengthen professional skills. It enables you to select your personal goals on practice them in safe space with guidance of experienced actuaries. The combination of practical cases that require initiative and appeal to actuarial knowledge, teachers who bring current issues to the lecture hall, and individual guidance by a mentor make the APC a unique and very valuable addition to your academic education.

So with that added value it's a must! Moreover: the Postmaster APC is offered in English as from September 2023 and will start twice in every year.

MORE INFORMATION

- Check your eligibility in the postmaster APC via CV Quickscan. Visit www.abs.uva.nl/apc
- The APC is 30 EC and taught in English;
- Contact hours every Tuesday 15:00 – 21:30.
- 1-year or 2-year track available
- Start in September and from 2024 also in February;
- The professional title AAG is recognized in all EU countries plus UK.

AUTHOR

Angela van Heerwaarden - Program Director AEMAS-APC

This is working at Financial Risk Management at KPMG



Our Financial Risk Management (FRM) team dives under the surface of various financial organizations: how are risks managed, modelled or valuated? Through a deep understanding of those organizations, we create and seize chances within risk management. Strategic, model-based, policy-based or from a legislative point of view. Whatever angle you can think of, you find opportunity everywhere within our Financial Risk Management team at KPMG.

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About KPMG

KPMG Netherlands is part of a worldwide network of accountancy and consultancy firms. In the Netherlands, where Piet Klijnveld laid the ground work for KPMG in 1917, we now have over 3,500 colleagues in twelve offices. Together we help leading organizations to look ahead and make the right sustainable choices. We sit at the tables where the future is decided and you are invited.

Welcoming & informal culture

As a member of the KPMG family, you get every opportunity to be and to show yourself. Unique insights come from unique people. That is why KPMG focuses on your professional and personal development from day one. You are encouraged to gain knowledge that will last a lifetime. With your talent and inner drive you are in the right place at KPMG. Are you ready to start a career working on international engagements in a vibrant environment where you are trusted with responsibility and where there is room for fun?





Let's meet

Read more about our FRM team within KPMG via the QR code and check out our vacancies at www.werkenbijkpmg.nl.

Or contact Céline van der Kooi at: vanderkooi.celine@kpmg.nl.

THE SPEAKERS

All the speakers of the Actuarial Congress 2023 are highlighted below to give a clear overview of the plenary, interactive and student sessions you can attend.

PUCK VEELING & LOUISE KOOPMANS

PLENARY SESSION I
KPMG



Puck Veeling AAG is a senior consultant within KPMG's Financial Risk Management team. With a background in Actuarial Sciences (University of Amsterdam) and Health Economics (Erasmus University of Rotterdam), she focuses on both actuarial and societal issues in her work. In this way, Puck is on the one hand involved in research for the Ministry of Health, Welfare and Sport, and on the other hand she is involved in the development of the KPMG Integrated Insurance Platform. With the Integrated Insurance Platform, Puck helps insurers rationalize data sources, models and analysis tools, which creates more space for improving models and digitizing the reporting process.

By ethics in my field of work and as an actuary, I think of independence, integrity and a duty of care towards the client and society. However, what is ethical (or what is not) can differ from person to person. By discussing this subject with each other, you can come to valuable and sometimes surprising new insights.

Louise Koopmans is a trainer. Louise has extensive experience in providing training on ethics, dilemmas and integrity in various organizations. In addition to her activities as a trainer, she advises companies on compliance and integrity. She specializes in (integrity) risk identification and (integrity) risk management. She sees behavior and culture as building blocks for good risk management, as well as practically applicable solutions.



MICHEL VELLEKOOP

PLENARY SESSION II
UvA



Michel Vellekoop is professor of Actuarial Science & Mathematical Finance at the University of Amsterdam. Since his appointment in 2009 at the UvA he has mainly focused on questions relating to the valuation and risk management of uncertain cash flows in both complete and incomplete markets. He was vice-chairman of the Mortality Research Committee (CSO) of the Dutch Actuarial Association (AG) and as such jointly responsible for the official mortality prognosis that was published by this committee in 2022. In the same year, he was appointed as a member of the Parameters Committee, which advised Minister Schouten on the parameters and scenario sets that are used for risk management calculations by the providers of Dutch pension schemes. These calculations will also play an important role in the intended transition to a new pension system in the Netherlands.

n his presentation, Vellekoop will talk about applications in actuarial practice in which the question arises whether we should always make full use of the possibilities that new statistical techniques offer us. Actuaries are accustomed to making statements about an uncertain future and it is only natural to make use of innovative new ways to analyze the every growing amount of datasets that they have at their disposal. But when this implies, for example, that results are harder to explain, or when such an analysis hinders solidarity, this also brings news responsibilities. Actuaries may now have to ask themselves more often than before under which circumstances the recently developed techniques should and should not be used.

RENE GEERLING

PLENARY SESSION III
AFM



René Geerling works as a senior supervisor and project lead Innovation at The Netherlands Authority for the Financial Markets (AFM). He supervises the insurance sector and innovation in financial products and services more broadly. His areas of interest include robo advice, financial software, personalized pricing of insurance products and European cooperation on innovation. He studied psychology, business administration and political science at the University of Amsterdam.

Insurers are increasingly using data to determine premiums. People with a healthy lifestyle receive a discount on their disability insurance; those who drive safely pay a lower premium for their car insurance, among other examples. But insurers could also measure where someone is driving, and when. If driving at night is riskier than during the day, should a nurse working night shifts pay a higher premium for his or her car insurance? Is it ethical to personalize profit margins? The technology behind personalized pricing offers opportunities but also raises dilemmas and (ethical) questions, which we will discuss in more detail in this session. How far do you think insurers can go in personalizing insurance premiums?

TJERRIE SMIT, VINCENT VAN DE VEN AND WESSEL VAN ZETTEN

PLENARY SESSION IV
NN



.Tjerrie has a broad background in Data and Advanced Analytics. He has an extensive knowledge on setting up data warehouses specifically in the customer domain. Tjerrie is a thought leader on data & AI. As head of Data & AI he started different Data and Data Science teams for NN. As the change lead of the data & AI strategy program he and his teams work on the data driven transformation of NN. Supporting Business units with data science expertise and data literacy programs.



Vincent is a Senior Data Scientist at NN, previously Deloitte, with a specialty in risk analytics. After several years of building application to identify fraud, Vincent specialized towards making Fair AI more tangible for NN and members of the Verbond voor Verzekeraars.



Wessel is a Data Scientist at NN, working on AI applications to identify fraud. He is particularly interested in the applications of open-source technologies in order to increase the interpretability of AI decisions, as well as developing means to test AImodels for bias.

ERIK-JAN DE VRIES

INTERACTIVE SESSION I
TRIPLE-A



Erik Jan de Vries is Practice Lead Data Analytics at Triple A - Risk Finance, an independent and innovative consultancy company specialised in risk management and actuarial services. With his team of data analytics consultants, Erik Jan helps organisations use their data assets to their maximum potential, bringing together business, organisation and technology. To be successful with Data Analytics, organisations must align their analytics efforts with their business strategy and embed data-driven decision making into their business processes, which typically requires appropriate tools and technologies, as well as an effective organisational structure.

As Data Analytics, and Artificial Intelligence (AI) in particular, become increasingly common tools for optimising business processes, organisations are starting to think more and more about the ethics of using these tools. Think for example about an automated process for mortgage approvals or insurance pricing, in which an AI algorithm decides whether or not your application is approved or what premium you will have to pay. How would you feel if “the algorithm says no”, or if you find out you have to pay more for your insurance than your neighbour? What if the algorithm had access to your social media or other personal data when making its decision? What is fair? In this session we will touch upon these topics and discuss ways in which organisations can deal with them.

MARCEL VAN DELFT

INTERACTIVE SESSION I
AG-AI



Pieter Bouwknegt (1968) is one of the persons within NN that can speak with enthusiasm about these topics and the ethical dilemmas that go with it. He studied econometrics and subsequently actuarial science. He is member of the Dutch Actuarial Society. Within NN, Pieter has been involved in actuarial reporting, product design, risk management and balance sheet related decisions. In all these field he was confronted with ethical aspects of his work. He learned that ethics is always about grey, never about black versus white. Besides his job, Pieter loves art-house films and enjoys traveling through Europe by train

MANDY LUO

INTERACTIVE SESSION I
DELOITTE



Mandy is a Director at the Actuarial & Insurance Solutions team within Financial Risk Management at Deloitte. She started her actuarial career in the year 2000 with Allianz Singapore, followed by AIA Singapore (part of AIG), Munich Re Group and SCOR/ReMark. She has lived in China, Singapore, Germany and currently Amsterdam with her husband and two children. She is a Fellow of the Society of Actuaries (USA) with international pricing, corporate actuarial, data analytics and managerial experiences.

MARC HEEMSKERK

INTERACTIVE SESSION II
MARSH & MERCER



Marc Heemskerk (1968) has been working for Mercer since 1992 as a retirement actuary. He advices the boards of pension funds and employers and is also a certifying actuary. Marc is is (locally) a well-known speaker on pension events. He plays a role in the national discussion about the reform of the Dutch pension system and wrote some leading articles about this subject. In 2008 Marc was the first actuary on national television, as a guest speaker in the information program “Buitenhof”. In 2016 Marc was voted as actuary of the year in the Netherlands. Marc is a teacher for Stichting Pensioenfonds Opleidingen and for the University of Amsterdam. His session will be in Dutch.

Marc zal vanuit zijn ervaring spreken over het begrip evenwichtigheid en de betekenis voor pensioenfondsen. Elk pensioenfondsbestuur behoort evenwichtig te besluiten, maar het beleid van pensioenfondsen is divers. Dit beleid raakt direct de pensioenen van deelnemers, die bij verkeerde beleidskeuzes zelfs gekort moeten worden. Kunnen we met sommen en modellen besturen helpen of moeten we anders denken? Bestaat er een eerlijk beleid voor iedereen? Maak kennis met dit onderwerp en met Mercer in deze sessie.

LEENDERT DE RIJKE

INTERACTIVE SESSION II
AETHIQS



Leendert de Rijke is a highly experienced advisor at AethiQs, with a background in both the financial services and health care industries. He specializes in risk management, with a particular focus on the psychological aspects of risk, including risk profiling, risk attitude, and risk culture. He is a member of the ERM committee of the Dutch Actuarial Society and serves on the Advisory Board for RBS Masters. Leendert has shared his vision and insights through articles and contributions to the knowledge library of AethiQs and the online platform RiskWorld.

Are you curious about how the new Dutch Pension Act will affect risk profiling of pension fund members? Then join us for an interactive session where we will delve into the implications of the act and discuss the latest strategies for obtaining insights on risk preferences of pension fund members. Together, we will explore the ways in which these preferences can be put into practice to ensure that pension funds are providing the best possible support for their members. We will consider the ethical side of these practices. This is a unique opportunity to engage on a topic that is currently at the forefront of the industry.

GILBERT PLUYM

INTERACTIVE SESSION II
DE HOOP



Gilbert Pluym Msc, AAG (1962) is Managing Director of De Hoop. De Hoop is a Dutch reinsurer who focuses specifically on people with a higher mortality rate due to medical conditions. De Hoop operates mainly in The Netherlands, Belgium, UK and the Dutch Antilles. Due to the deep medical knowledge available within De Hoop, we can deliver tailor-made proposals in complex medical situations. This makes it possible for people who otherwise would not be able to get a life insurance to get the necessary insurance to fulfill their (financial) dreams.Gilbert is active in the Dutch Insures Association as chairman of the Commission on medical and ethical issues. He has also served as member of the Life Insurance Board and chairman of the Board on terms of employment within the insurance sector.

PIETER TJERKSTRA & GERJAN WIENEN

STUDENT SESSION I
a.s.r



Pieter Tjerkstra is a pricing actuary for P&C products at a.s.r. He is focused on pricing automotive products for the direct and intermediary markets. Pieter studied Econometrics at the University of Groningen and he is an UvA alumnus of the Actuarial Practice Cycle. After his studies, he started as a consultant Actuary in the non-life area at EY. After a few years he followed his passion and started to work on the pricing of the Ditzo and a.s.r. products.

Gerjan Wienen is a pricing actuary for P&C products at a.s.r. focusing on pricing insurance products such as legal, liability, travel and pleasure craft insurance for the direct and intermediary markets. Gerjan studied Physics and Mathematics at the Free University of Amsterdam and took several actuarial courses at the UvA AEMAS program. His working experience involves working as a consulting actuary, reserving actuary and primary and secondary school arithmetic and mathematics teacher. We are looking forward to having a discussion with you on the ethical dilemmas in product development.



MELCHIOR MATTENS & PATRICK DANNENBURG

STUDENT SESSION II
ARCTURUS



Melchior Mattens is partner at Arcturus, an actuarial consultancy firm aimed at (non-life) insurers. By bringing together knowledge from different disciplines and applying innovative quantitative models, he supports many different insurers in advancing their risk management. In the past he has spoken at various conferences, including the Actuarial Congress and in 2018 he won the actuarial talent of the year award for his vision on the role of actuaries and econometricians in artificial intelligence. He is also a member of the Insurance Committee of the Dutch Actuarial Association.

With more than 20 years of experience in the insurance sector, Patrick Dannenburg is an experienced actuary and works as partner at Arcturus. His experience is particularly in the field of property and casualty insurance. He previously worked as a department manager and actuarial function holder at a medium-sized Dutch insurance company, as a senior manager at a large consultancy/accountancy firm and as a supervisory specialist and Solvency II program manager at De Nederlandsche Bank (DNB). From his broad background, he has a warm heart for the 'financial health' of organisations, while not losing sight of the human interaction.



In the light of the theme of ethics, Melchior and Patrick will consider in their presentation the 'duty of care' of insurers towards their policyholders. An example is the issue of whether insurers should be obliged to offer prevention as part of the insurance package. Or what sustainability and climate change mean in the inability or unwillingness to accept certain risks and/or insured persons. And what considerations do you make if, on the one hand, the regulator requires you to manage your risks adequately and, on the other hand, coverage is expected from a social (ESG) point of view? Enough perspectives to discuss which ethical considerations play a role with respect to (un)insurability. What are your thoughts?

Wij zijn NN Group

Bij NN is het ons doel om mensen te helpen zorgen voor wat zij echt belangrijk vinden. De wereld waarin we leven mag dan veranderen, wat er echt toe doet voor mensen, blijft hetzelfde.

Samen creëren we een cultuur waarin ruimte is voor openheid, en waar jij je aangemoedigd voelt nieuwe kennis op te doen, wendbaar en veerkrachtig kunt zijn. Niet voor niets is 'You matter' de belofte die we doen. Jij doet ertoe, in alle rollen die je vervult want wat belangrijk is voor jou, is belangrijk voor ons.

Werk is een belangrijk onderdeel van je leven, maar jij bent meer dan alleen collega en dat snappen we heel goed. Vaardigheden en competenties ontwikkel je niet alleen op werk. Je hebt verschillende rollen in het leven en overal neem je wat van mee. Dat maakt ons allemaal anders, en dát is onze grootste kracht. We geloven dat ons bedrijf het sterkst is als we openstaan voor alle verschillende aspecten van de mens, ongeacht hoe we eruit zien, waar we vandaan komen, of wie we liefhebben. Daarom maken we ons bij NN sterk voor diversiteit, inclusie en gelijke kansen voor iedereen.

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Bieden service aan

18 miljoen klanten

Wij helpen mensen zorgen voor wat zij echt belangrijk vinden. Hierbij baseren wij alles wat we doen op onze kernwaarden care, clear, commit.



Mélanie (junior consulting actuaris NN Leven & Pensioen):
"Begin 2020 begon ik met mijn afstudeerstage binnen NN L&P. Na een brainstormsessie kwam hier een interessant actuarieel onderwerp uit voor mijn masterscriptie. Ik kreeg veel tijd en begeleiding voor mijn scriptie en het was fijn om te kunnen sparren met mensen uit het actuarieel vakgebied. Tegelijkertijd werd ik betrokken bij de werkzaamheden binnen het team. Dit gaf mij een goed beeld van hoe het actuariaat in de praktijk eruit kan zijn. "Wat ik ook erg fijn vind, is dat we samen kijken naar geschikte opdrachten en dat ik zelf aan het roer sta van de opdrachtkeuze. Tevens zijn er verschillende opleidings-mogelijkheden. Zo ben ik begonnen aan de opleiding tot Actuaris AG."



Ook Jelle (junior consulting actuaris NN L&P) deed zijn afstudeerstage binnen NN L&P:
"Via mijn collega's kwam ik in contact met veel verschillende actuariële afdelingen. Op die manier kon ik mij oriënteren op de vele mogelijkheden binnen NN na mijn stage. Ik kreeg lucht van een splinternieuwe afdeling waar mijn collega Mélanie net was begonnen, NN Actuarissen. Dit is een intern consultancy team dat zich op projectbasis binnen heel NN L&P beweegt. Op deze manier zijn de werkzaamheden erg divers en flexibel. Na drie sollicitatierondes werd ik aangenomen als junior consulting actuaris."

Meer informatie?

Buiten (afstudeer)stages en (starters)posities, zijn er binnen heel NN ook mogelijkheden voor een werkstudentschap en verschillende traineeships.

Wil jij kennis en ervaring opdoen en tegelijkertijd een mooi cv opbouwen? Voor vragen kun je contact opnemen met onze stagecoördinator:

Bianca Hoogweg
stagebureau@nn.nl
+31(0)6 10 81 68 01

Of met Mélanie en/of Jelle:
melanie.de.looze@nn.nl of
jelle.schakenraad@nn.nl



Ethiek

Tijdens een hackaton enige jaren geleden werkten mijn collega's en ik aan een applicatie waarmee we een 'Bewijs van leven' konden opvragen bij klanten. De applicatie werkte op basis van computer vision; een persoon houdt zichzelf voor de camera en toont zijn of haar paspoort. Op de testdag ging het direct mis. Eén van mijn collega's, die van buitenlandse afkomst is, kreeg de volgende foutmelding: 'Dit is geen geldig paspoort'. Toen ik het zelf probeerde, ging het wel goed. We kwamen tot de conclusie dat wij dachten dat we het model hadden geleerd wat een geldig paspoort is. Wat we in werkelijkheid hadden gedaan, was het model leren wat een geldig Nederlands paspoort is.

Dit voorval zette mij aan het denken en was de aanloop naar het ethisch kader van NN. Ons eigen kader is gebaseerd op de 7 principes van betrouwbare AI die zijn opgesteld door de high-level expert group on artificial intelligence van de Europese Commissie.

Het NN ethisch kader is nu een belangrijke set aan regels en geeft antwoord op drie kernvragen voor de inzet van Artificial Intelligence. 'Kan het?', 'mag het?' en 'wil ik het?'. Kan het technisch, mag het wettelijk, en is het ethisch ook verantwoord. Data en AI zijn een belangrijk onderdeel van onze strategie, maar we moeten wel zeker weten dat onze AI betrouwbaar en zorgvuldig is.

De uitvoering van onze AI checklist is constant in ontwikkeling. Zo hebben we het afgelopen anderhalf jaar veel onderzoek gedaan naar BIAS detectie als onderdeel van het non-discriminatie principe. Dit onderzoek zorgt ervoor dat we steeds meer tools krijgen waarmee we BIAS in modellen opsporen tijdens het ontwikkelproces. Dit is nodig om eenduidig en onderbouwd een uitspraak te doen over BIAS en discriminatie. Hiervoor is veel onderzoek nodig dat wij vaak uitvoeren in samenwerking met studenten in een afstudeeropdracht. Dan onderzoeken we een specifiek onderdeel van BIAS detectie en proberen op basis van dit onderzoek onze procedures en tooling verder te optimaliseren. Dit allemaal om ervoor te zorgen dat onze AI toepassingen veilig en betrouwbaar zijn voor onze klanten.

AI doet dus veel voor ons, maar wij moeten op ethisch gebied onszelf ook continu de vragen blijven stellen; 'kan het (nog), of kan het beter?', 'mag het (nog) of zijn de regels veranderd' en 'wil ik het (nog), voldoet het nog steeds aan onze normen en waarden?'

Tjerrie Smit
Head of Data & AI bij Nationale-Nederlanden

THE VSAE



The VSAE Board from left to right: Anneke Schroeter (External Affairs & Marketing), Randy Griekspoor (External Affairs), Julie van Oldenborgh (Chairman), Sjors de Boer (Treasurer), Ira de Witte (Internal Affairs, Vice Chairman & Secretary)

The VSAE, Association for Actuarial & Econometrics Students, has been the study association for students of quantitative economics at the University of Amsterdam since 1963. The VSAE offers these students the opportunity to develop both intellectually and socially, to orient themselves on the labor market and to distinguish themselves through participation in extracurricular activities. We offer a wide range of activities and events, ranging from small social activities to the Econometric Game, a multi-day event in which the top 30 universities in the world quantitatively solve a social issue, and the Actuarial Congress. This, together with the possibility to participate in our Analytics Academy, access to our vacancy website Careers4Quants and much more, means that we can add unique value not only to our members, but also, for example, to you as an actuary through this conference. On behalf of the committee behind this congress, the board of the VSAE and the rest of the association, we wish you an inspiring day!

Roetersstraat 11, Kamer E1.32 1018WB Amsterdam
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GEÏNTERESSEERD?
Neem dan contact op met Iris Koot:
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Telefoon: 06 — 156 316 19

> OUT OF THE BOX ACTUARISSEN EN RISK PROFESSIONALS

THE COMMITTEE



The actuarial congress committee 2023 from left to right: Ira de Witte (Coordinator), Nuria Nouel (Acquisition & Promotion), Coen de Jong (Acquisition & Promotion), Kaj Soellaart (Chairman), Valentine Gu (Speakers) and Dionne Pimentel (Magazine & Website).



Kaj Soellaart

CHAIRMAN

Hi there, my name is Kaj and I'm the chairman of the upcoming edition of the Actuarial Congress. This year's theme sparks my interest a lot and I'm looking forward to how it applies to the actuarial field. As a committee we have put our best efforts into making this congress a success. We hope to take this positive energy with us during the event. I can't wait to welcome you and make it an unforgettable event together!



Nouria Nouel

ACQUISITION & PROMOTION

My name is Nuria and I am currently doing my Master Econometrics at the UvA. Together with Coen, I was responsible for both the acquisition and the of this year's Actuarial Congress. I am very proud of the companies that are sponsoring and I hope that our hard work ppromotion ays off and results in another successful congress!

Ira de Witte

COORDINATOR

My name is Ira and I am coordinator of the Actuarial Congress. For the past year I have been on the Board as Internal Affairs, Vice-Chairman and Secretary for the the study association VSAE. I was able to organize many educational and fun events throughout the year, including the Actuarial Congress. I am currently in my last phase of the bachelor Econometrics.

The committee has worked very hard this year to set up a great congress and I can proudly say that this is the first year that the congress is held in English. We, the committee and the board, think it is very important to make the congress accessible to the students, as well as all actuaries. I'm looking forward to seeing all of you in March!





Coen de Jong

ACQUISITION & PROMOTION

My name is Coen de Jong and - together with Nuria - responsible for Acquisition and Promotion of the event. It was amusing to interact with all the companies that make this event into what it is. Currently I am in my final year of the Bachelor Econometrics, thus making such a professional event even more interesting. Hopefully you will find it as instructive as it has been for me in the past year. Looking forward to meet you at the event!

Valentine Gu

SPEAKERS

My name is Valentine Gu and I am a Master's student in Actuarial Science and Mathematical Finance. I am very happy that we are able to organize such a large event as the Actuarial Congress, especially with topics that are very interesting to me as an Actuarial Science student. I am looking forward to seeing the different perspectives and discussions between various experts in the industry around our theme Fairness since it is one of the most relevant topics in the future of the actuarial world.





Dionne Pimentel

MAGAZINE & WEBSITE

My name is Dionne Pimentel and I am currently studying for a master's degree in Econometrics at the UvA. Besides this, I work as an academic tutor at dPT. Within the committee of the Actuarial Congress, I am responsible for the website and the magazine together with Jet. I hope we can organize another great and successful congress this year!

Jet van Ommeren

MAGAZINE

My name is Jet van Ommeren and I am currently studying for my bachelor in econometrics. My role in the committee of the Actuarial Congress was creating this magazine together with Dionne. We really enjoyed the process of creating the magazine. I am very excited about the topic of this years congress, and I am looking forward to learning more about how ethics can be applied in the field of actuarial science. I believe that we will have another interesting and successful congress this year!



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