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Call for Papers

1ST ANNOUNCEMENT



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Invitation

From 4 to 8 June 2018, the German Actuarial Association (DAV) in conjunction with the International Actuarial Association (IAA) will host the 31st International Congress of Actuaries (ICA) in Berlin. This event will be the global summit for the exchange of actuarial knowledge. The scientific program will include plenary sessions by eminent keynote speakers, limited attendance experiences, seminar-type sessions with invited lecturers and a variety of sessions at which submitted papers will be presented. Actuaries, scientists and practitioners from around the world are encouraged to participate in shaping the program by submitting relevant, leading-edge ideas, research results and insights that will expand and grow the current body of actuarial knowledge.

GENERAL INFORMATION ABOUT THE SCIENTIFIC PROGRAM:

The main part of the ICA 2018 will be the scientific program including over one hundred sessions geared towards actuaries, academics, scientists and practitioners from around the world who share an interest in actuarial topics in insurance and finance. For this event, the Scientific Committee has identified a wide range of regional and international actuarial topics and related subtopics. The main topics for the ICA 2018 are related to eight different special-interest sections, reflecting the structure of the IAA Sections:



Financial Risk & ERM



Non-Life



Health



Life



Pensions Benefits
& Social Security



Consulting

PROFESSIONALISM

EDUCATION

The topics cover theoretical and practical issues, innovative approaches and day-to-day problems and thus encourage cooperation between academia and the insurance industry. Moreover, against the background of societies and environments that are changing at an increasing pace, various forward-thinking topics have been proposed in order to cover current and upcoming trends such as demographic change, big data analytics, shared economy, urbanization etc.

The event will take place at the ESTREL Convention Centre in Berlin – one of Europe's most fascinating cities.

We hope that ICA 2018 has sparked your interest and that you will enrich the event with thought-provoking papers and lively discussions. We are looking forward to meeting you in Berlin 2018!



Klaus Heubeck
Chair
National Organizing Committee



Michael Renz
Co-Chair
Scientific Committee



Hans-Joachim Zwiesler
Co-Chair
Scientific Committee



ABOUT THE ICA/VICA

Over 200 lectures by more than 250 lecturers, up to 11 parallel lecture halls with a capacity from 60 to 750 participants, plenary and semi-plenary sessions with eminent guest speakers and presentations of best papers in various subject areas – in 2018, the international actuarial expertise will meet in Berlin. Be part of it.

FORMATS

The scientific program of ICA 2018 will include a wide variety of different formats suitable for all kinds of talks on actuarial and financial issues. In plenary sessions, internationally renowned speaker will present and discuss the latest topics that the profession will move forward in 2018 and beyond. Plenary Sessions will be held on each day of ICA 2018.

While plenary sessions will be highlights for all actuaries attending the congress, the semi-plenary sessions will focus on one or two of the program strands. In these, well-known experts will present forward-thinking topics of the corresponding fields. In addition, numerous parallel sessions of the eight program strands will reflect the wide variety of topics facing the actuarial world.

AWARD SESSIONS

The scientific program will also include various sessions in which selected national and international prize winners introduce and discuss their research results. Alongside the ICA 2018 Best Papers Awards and the IAA Section Best Papers Awards, award sessions for various well-known prizes will be integrated into the scientific program as well. These include the Bob Alting von Gesau Prize in the ASTIN Section, the SCOR Actuarial Prize or the National Young Talent Awards from France (Concours des Jeunes Actuaire 2013-2017), Germany (GAUSS-Preis), Switzerland (Walter-Saxer-Versicherungs-Hochschulpreis) and Portugal (Jovem Atuário).

YOUNG TALENTS PROGRAM

As part of the regular program, ICA 2018 offers three formats that are particularly suitable for the active participation of scientists who are just starting their careers. The “Innovation Platform” and the “Summer School” are workshops that will allow deeper discussion of economically important and mathematically challenging topics.

Anyone who cannot travel to Berlin in person can participate in the “Deep Dive”. This online session, especially designed for young academics, will combine a live talk from Berlin with attractive online offerings.

DIVERSITY CONFERENCE

Diversity is important to the long-term survival of the actuarial profession – this is the fundamental motivation behind the diversity conference, which takes place on Sunday 3 June 2018, at the ESTREL Berlin, 9:00 to 13:00. Starting with the ICA 2010 in Cape Town and followed by a second event in Washington in 2014, the conference is now taking place for the third time, this time in connection with the ICA 2018. The underlying thrust behind this conference is that greater diversity in the actuarial profession will transform research into practical solutions in wider areas, will extend opportunities for actuaries to work and practice and will ultimately create more jobs. All actuaries and interested parties participating in ICA 2018 are invited to attend the congress (free of charge) one day prior to ICA 2018.

ABOUT THE ICA/VICA

PROGRAM SCHEDULE

Sunday, 3 June	Monday, 4 June	Tuesday, 5 June	Wednesday, 6 June	Thursday, 7 June	Friday, 8 June
Diversity Conference	Opening Ceremony	Parallel Sessions	Parallel Sessions	Parallel Sessions	Parallel Sessions
	Plenary Session	Plenary Session	Plenary Session	Plenary Session	Plenary Session
					Closing Ceremony
Lunch					
Registration	Parallel Sessions	Limited Attendance Experiences / City Tours	Parallel Sessions	Limited Attendance Experiences / City Tours	
Welcome Event		Garden Event		Farewell Event	



These sessions consist of three modules and combine a live presentation – either held live on stage in Berlin or presented as a discrete webcast – with self-study materials in the preliminary preparation module as well as a Question & Answer webcast in the subsequent session module. This gives participants the exclusive chance to discuss open questions on the presentation directly with the speaker as well as with all other attendees.

ONLINE FORMATS AT THE VIRTUAL ICA 2018

For the very first time in history and as an innovation of ICA 2018, the scientific program will also include a variety of virtual formats on dedicated topics. Anyone who is interested but unable to participate in the ICA onsite will find a suitable alternative in the Virtual ICA 2018. The virtual event enables actuaries from all over the world to join the congress despite their current location.

During the VICA program, a selection of presentations and highlights from the convention center in Berlin will be broadcasted live via internet. In addition to that, the Virtual ICA 2018 will also offer special online sessions.

The complete online session program of VICA 2018 will provide more than 20 sessions on a variety of subjects from all congress topics. Thanks to the wider and more detailed opportunities for discussion and analysis offered by this new format, some online sessions are devoted to more technical and/or specialist topics.

The third format of Virtual ICA 2018 will be an Insurance Simulation Game, in which 25 teams of young scientists and actuaries from around the world will have the opportunity to compete with their virtual insurance companies against each other. In a realistic game environment, the teams have to take a large number of management decisions in order to be the best company at the market.



SECTIONS

The ICA 2018 scientific program is structured along eight special-interest sections related to the IAA sections. The common primary objective of all sections is the promotion of actuarial research to push the boundaries of actuarial knowledge and to promote and facilitate an international exchange of views, advice, research and practical information among actuaries and other experts involved in these fields.



AFIR/ERM

AFIR/ERM has its main topics in enterprise risk management and particularly financial risk fields.



ASTIN (NON-LIFE)

ASTIN is continually working to further develop the mathematical foundation of non-life insurance and reinsurance.



IAAHS (HEALTH)

HEALTH has its primary topics in pricing and reserving, product design, health aspects of demographic transition, the impact of digitalization and medical developments and in regulatory aspects.

IAAHS (LIFE)

The focus of LIFE is the field of life insurance. Examples of topics covered are life insurance policy design, biometric risks, asset liability management or solvency issues.



PBSS (PENSIONS, BENEFITS & SOCIAL SECURITY)

The scope of the PENSION (PBSS) covers public programs, occupational pension schemes and private

pension plans as well as annuities, share options, and other employee benefit provision implemented by IORPs, mutuals or insurance companies.



IACA (CONSULTING)

IACA leads consulting actuaries across all fields of actuarial practice both in the international arena and as international events impact the landscape in which they work. In addition, IACA supports its member consulting actuaries in the context of their professional responsibilities and business interests.

PROFESSIONALISM

Professionalism for the actuarial profession comprises the application of specialist actuarial knowledge and expertise; the demonstration of ethical behavior, especially in doing actuarial work; and the actuary's accountability to a professional actuarial association or similar professional oversight organization. The professionalism program focusses on all kind of questions arising in this context.

EDUCATION

Education will deal with different current and future topics on (continuing) qualification of actuaries. There will be a broad and interesting program, even though Education is not part of the Call for Papers.



CALL FOR PAPERS

Apart from plenary and semi-plenary sessions, the scientific program of the ICA 2018 will include up to 11 parallel sessions with about 100 slots for the presentation of submitted papers. Each parallel session will last 90 or 120 minutes and contain a number of 30- to 45-minute talks. Related topics will be grouped together in one parallel session. Through the Call for Papers, ICA 2018 offers the opportunity to be part of the scientific program and to contribute to one of those sessions.

ABSTRACT SUBMISSION PROCEDURE

The Scientific Committee welcomes

- innovative research from academia (actuarial science, finance, insurance, risk management, etc.),
- papers written by national or international task forces and working parties as well as
- papers by practitioners describing results related to practice or open problems that might benefit from further scientific analysis.

For this purpose, the Scientific Committee has identified a wide range of main topics and subtopics. The main topics for the ICA 2018 include theoretical and practical issues, innovative approaches and day-to-day problems. Authors who are interested to give a presentation at the ICA 2018 are encouraged to submit an abstract using the ICA 2018 online submission tool accessible via the ICA 2018 website, from 1 February 2017 and no later than 31 July 2017.

ABSTRACT SUBMISSION REQUIREMENTS

Submissions must meet the following requirements:

- Authors have to submit an abstract of 200-300 words.
- This has to be accompanied by
 - a description of the practical value of the submitted proposal
 - and an overview of related literature or other sources.
- The submission must be written in English.

Authors of accepted abstracts have to provide a presentation, a brief bio and a portrait. Moreover, they have to agree to the distribution of the submitted material (abstract, presentation, etc.) within the scope of the ICA 2018.

GENERAL TIMELINE

1 February 2017	Start of Call for Papers
31 July 2017	Submission deadline
November 2017	Notification of authors on final decision for <ul style="list-style-type: none"> • general scientific program onsite and online • ICA 2018 Best Paper Awards • IAA Sections Best Paper Awards
19 November 2017	Publication of provisional scientific program

MAIN TOPICS

The following list shows the main topics for the ICA 2018 related to the different special-interest sections. Apart from section-specific topics, the scientific program includes also joint sessions covering cross-section topics. Please note that the list of main topics and sub-topics for the ICA 2018 is not exclusive. Candidates may also submit their own proposals for appropriate topics and sub-topics that are not contained in the list.

AFIR/ERM

Risk Management

- Risk strategy, risk appetite, limit systems
- Performance measurement
- Risk management in extreme scenarios and implications in a macro-economic context (e.g. pro-cyclical effects)
- Governance, communication and influence of risk management on business decisions
- Three years of ORSA experience

Risk Modelling and Valuation

- Pricing, managing and modelling of guarantees
- Approximation techniques (replicating portfolios, curve fitting, LSMC) and their application to the projection of own funds and capital requirements
- Valuation of assets in incomplete markets
- Modelling and assessment of alternative investments
- Economic/interest-rate models: modelling, valuation and implications for business decisions
- Validation of internal models, technical provisions, and model uncertainty
- Architecture of internal models

Investment Management and Asset-Liability Management

- Investment and portfolio strategies under changes in the market environment and customer behavior
- Impact of demographic development on investment decisions
- Optimal hedging strategies and the efficient use of derivatives for long-term risks and commitments

Solutions to Biometric, Mortality and Longevity Risks

- Digitalization, big data, and other trends in pricing, modelling of underwriting risks, preferred underwriting
- Securitization, reinsurance and capital markets
- New sources of mortality improvement (or deterioration) and their implication for the insurance sector

Solvency and Regulatory Environment

- Latest developments concerning Solvency II
- Impact of Solvency II on managing assets & liabilities
- Managing economic and local regulatory demands
- Standard model vs. internal model
- International capital standards (ICS)

Capital Management

- Risk transfer (internal/external)
- Optimal reinsurance structures
- Index-linked securities, investment alternatives that improve capital efficiency
- Reorganization of group structures

Customer Behavior

- Global and individual drivers of customer behavior
- Impact of changes in social, political and financial environment on (savings) behavior
- Mathematical and statistical methods to describe, model and quantify customer behavior
- Methods and solutions to influence customer behavior

Emerging Risks

- New developments (economic, political, business, socio-economic differences, globalization) and resulting emerging risks
- Mathematical and statistical methods to model and quantify emerging risks
- Cyber risk, climate change, autonomous driving, and aging society
- Financial networks, assessment and modelling of complex interdependencies of risks in distressed situations
- Calibration and validation of models given sparse historic data
- Application of models from other industries (e.g. chemical, pharmacy, nuclear, biology) to insurance

MAIN TOPICS

ASTIN

Data Science and Big Data Analytics

- Claims settlement
- Telematics
- Building risks especially with regards to geolocation
- Rating based on pattern recognition
- Early warning (App)
- Connecting big data to actuarial problems
- Applications to climate change and Nat-Cat
- Fraud detection

Discount Rate

- Damage inflation vs. negative discount rate
- Impact of inflation on product design and pricing

Experience with Solvency II

- Effects of the actuarial function on management control, with special emphasis on their implementation at national level
- Effects of Solvency II on legacy business in general and the run-off market in particular
- The role of the actuary
- CERA

Product Innovation

- Application for insurance and execution using photos or film
- Rating via film
- Peer-to-peer insurance, sharing economy, crowd insurance
- Decollectivisation
- Reinsurance business model: possibilities and benefits
- How does the relevant client “tick”, how do we model his needs? (connection to psychology)
- Potential impact of self-driving cars on the insurance market

Aspects of Insurance Supervision

- Insurance supervision with regard to operational risk (OpRisk)

Reinsurance

- Optimal risk transfer and reinsurance structures
- Innovations in reinsurance and new designs in securitization

Methods

- Alternative pricing methods: what comes after GLM?
- What can we learn (and copy) from other industries (Google, eBay etc.)?
- Non-classical reserving methods, e.g. single damage reserving analogue to calculation
- Classical methods in times of big data
- Comparison of methods that are not accessible to a direct IT solution

Statistical Learning

- Causality in statistical learning, machine learning
- Transfer of methods from other areas (e.g. biology, statistics, medicine, pricing for retailers)

Emerging Risks

- Cyber risks
- Climate change
- Autonomous driving

Claims Reserving

- Dynamic run-off uncertainty
- Granular data and individual reserving
- Market consistent valuation of liabilities

Progress in Simulation

- Efficient simulation of rare events
- Sequential Monte Carlo methods
- Support vector machines

New Insights from old Methods

- Bornhuetter-Ferguson principle
- Credibility theory (see publication by the task force „Tarifizierung“)

MAIN TOPICS

HEALTH

Actuarial Pricing and Reserving for Health Insurance

- New calculation models and principles of health insurance
- Pricing updates: long-term business, short-term business, international comparisons
- Predictive modelling in health insurance
- Long-term care insurance: premium and reserve calculation, profit analysis
- Underwriting in health insurance

Health Insurance Product Design

- Packaging health- and lifetime-related products
- Micro-health insurance
- Medical analytics in healthcare pricing and product design
- Should healthcare benefits be extended to minimize policy exclusions?

Demographic Transition and Health Insurance

- Long-term demographic trends in mortality rates, morbidity rates and medical expenses
- Pandemics
- Funding old-age health needs via personal wealth
- Sustainable financing of health insurance in private and social systems
- Future challenges: how to create value in a changing environment and what can actuaries do?

Impact of Data Availability, Digitalization and Medical Developments on Health

- Impact of global medical or pharmaceutical developments on pricing, longevity or costs
- Genetics and genomic drugs – does this mean the end of risk pooling?
- Impact of activity- or lifestyle-based data on pricing
- Disease management
- Long-term care insurance: statistical data and models for disablement and extra mortality of disabled people
- Customer behavior and new common diseases

Regulatory and Social Aspects for Health

- Solvency II and capital requirements
- Private medical insurance vs. public health care, international comparisons
- Premiums and provisions in private health insurance: statutory rules vs. actuarial requirements
- Unisex tariffs in health insurance

Please also note the topics for joint sessions of the program tracks LIFE/HEALTH

MAIN TOPICS

LIFE

Actuarial Pricing and Reserving for Life Insurance

- Risk classification, underwriting and price discrimination (unisex, etc.)
- Pricing of options and guarantees
- Development of underwriting techniques
- Completion of void spaces: best estimates for risks without data
- Efficient insolvency detection: accounting standards vs. actuarial evaluation
- Does rational customer behavior exist?
- Life risk mitigation and control at individual and portfolio level
- Coping with long-term-guarantees in a low interest rate environment

Life Insurance Product Design

- Product innovation in life insurance
- Guarantee designs for the low interest rate environment
- Changes of customer preferences: regional and global trends
- The impact of random and uncertain environments on product design

Demographic Transition, Emerging Risks and Life Insurance

- The impact of megatrends on life insurance risk: migration, urbanization, climate
- New models for predicting longevity/mortality improvements
- Demographic change and its impact on LTC and occupational disability insurance
- The impact of data availability and digitalization on life: marketing, underwriting, claims and actuarial modelling
- Mathematical models for emerging risks and their impact on life insurance

Regulatory and Social Aspects of Life Insurance

- Trends in regulation: non-discrimination, products and other issues
- The role of the actuary in regulation
- Review of Solvency II
- Customer protection and Solvency II paradigms: goal achieved?
- Policyholder communication: needs and demands
- Private vs. public solutions for insuring life risks

Please also note the topics for joint sessions of the program tracks
LIFE/HEALTH and LIFE/PENSION

MAIN TOPICS

PENSIONS

Old-Age Provision in a Low Interest Environment

- Asset-backed vs. pay-as-you-go systems in a low interest environment and decreasing populations
- Possibilities to generate revenues in a continuing low interest period
- Protection for long-term saving: inflation, real and nominal interest rates

Intergenerational Fairness in Occupational Pension Schemes

- Guarantees and inter-generational fairness in connection with pension promises, looking for solutions for both old and new pension deals

New Approaches for Occupational Pension Schemes

- Development of pension solutions in a dynamic scenario/dynamic models
- Flexible design of capital market guarantees that are appropriate and adequate for beneficiaries
- New forms of guarantee similar to defined ambition or collective DC. What experience have you had in your country?
- Development of successful/alternative concepts for the decumulation phase; how can benefits be made more attractive?

Aspects of Occupational Pension Schemes with regard to Staffing Policy and Social Policy

- What are employers' motives for setting up an occupational pension scheme?
- How far is the sponsoring employer liable for his defined-benefit occupational pension promises? – An international comparison

The Solvency Question for IORPs

- Own funds for IORPs with respect to the specific characteristics of occupational pensions. Do we need a Common Framework or HBS? What can better suited solutions look like?
- Protection mechanisms in occupational pensions. How much security do we need in occupational pensions? An international comparison

Pension Systems for International Organizations

- United Nations Joint Staff Pension Fund and similar institutions

Management Control

- Econometric modelling of capital markets applied to long-term management control in IORPs

Life Model

- Investigation of different approaches to calculate a sufficient income over a life-span ("life model"), especially to avoid poverty in old age and to finance education and academic training

Retirement Choices

- Early retirement
- Flexible retirement
- Late retirement
- Partial retirement

Employer Accounting for Pensions

- Current developments on IAS19 and US GAAP – Comparison with other local standards
- Insurance accounting vs. employer accounting under IFRS

Pension Benefit Statements and Pension Tracking Services

- TTYPE – National and international pension tracking services for all pension providers
- Pension benefit statements – How can different types of pension scheme be made comparable?

Please also note the topics for joint sessions of the program tracks LIFE/PENSION

MAIN TOPICS

JOINT SESSIONS

HEALTH and LIFE as well as LIFE and PENSIONS have proposed topics for joint sessions, which cover fields that are of common interest. These sessions are organized jointly aiming at a reciprocal exchange of knowledge and experiences, but also submissions for these topics that cover specific aspects related to HEALTH, LIFE and/or PENSIONS only are highly welcome.

JOINT SESSIONS LIFE & PENSIONS

Design of Life Insurance and Pension Products

- New guarantee designs for the low interest rate environment
- Changes in customer preference: regional and global trends
- Product innovation in life insurance and pensions
- Designing and pricing annuities and LTC products in a stochastic environment

Demographic Change and Development of Life Risks

- New models for predicting longevity/mortality improvements
- Emerging risks and their impact on life insurance and pensions

JOINT SESSIONS HEALTH & LIFE

Product Design in Life Insurance and Health Insurance

- Combining health and life insurance products
- Long-term care insurance
- Product design in a changing scenario (in the presence of non-diversifiable risk of change, e.g. from ageing, demographic trends, morbidity trends and global medical developments)
- Microinsurance in life and health

Impact of Data Availability and Digitalization on Life Insurance and Health Insurance

- Definition and role of big data
- Use of big data in risk classification, underwriting and pricing
 - predictive modelling
 - making use of activity or lifestyle based data
 - individualization vs. collectivization in modern insurance of persons
- Genetic research and developments – the impact in modern insurance of persons
- Data protection: restrictions on access to data

Demographic Change and Development of Life Risks and Health Risks

- Impact from megatrends on biometrical risks: migration, urbanization, climate change, new common diseases
- Demographic change and its impact on long-term care and disability insurance
- Models for predicting trends in mortality rates, morbidity rates and medical expenses
- Mortality and morbidity at very old ages

Regulatory Aspects of Life Insurance and Health Insurance

- Solvency II: status quo and future perspectives of regulation
- Private vs. public solutions for insuring life risks and health risks
 - international comparisons
 - statutory rules vs. actuarial requirements

MAIN TOPICS

IACA (CONSULTING)

External Drivers

- Future of insurance regulation
- Mass migration: How changes in demographics affect risks
- International actuarial standards
- Capital market expectations in Europe
- Consulting actuaries dealing with Solvency II – lessons learnt

Current Issues

- Starting insurance companies
- Outsourcing of actuarial services, pitfalls for providers
- Mergers and acquisitions
- Diversity and Multi-disciplinary teams
- Fin-Tech: Bitcoin, Blockchain, Algorithms, Robotics
- Volatility and Terrorism

Emerging Opportunities

- Non-traditional consulting jobs
- Educating clients about ERM
- Industrialization of actuarial processes and its impact on consulting
- Environmental consulting
- What will be the next big topic for consultants in Europe after Solvency II has been successfully implemented?
- Actuaries in banking: learning from South Africa and Australia
- The challenges and opportunities for actuarial consultancies in Africa
- Doing business in Africa: considerations for pricing work
- New product development – a task for consultants?

Data Analytics: The New Consulting Frontier

- Digitalization – can we play a role?
- Actuaries and sustainable development goals
- Actuaries working in new professional fields that are concerned with rapidly developing technologies
- The challenges and opportunities of performing data analytics in new territories
- Considerations when entering a new industry to perform data analytics

The Role of the Consulting Actuary

- Actuaries working in interdisciplinary teams with professionals outside the actuarial profession
- Outsourced calculating machine or more?
- The social impact of actuarial work
- The actuarial role in setting regulation (for all sectors)

Please also note the topics for joint sessions of the program tracks IACA/Professionalism

MAIN TOPICS

PROFESSIONALISM

- Actuaries in “Non-standard” Working Environments (cross-border, outside financial industry, in other political systems, with different mathematical backgrounds)
 - Managing Conflicts of Interest
 - Serving the Public Interest – what does it mean for the individual actuary, what does it mean for the professional association?
 - The Role of the Actuary – in particular, statutory roles and regulatory key functions (joint sessions with other special-interest sections)
-

JOINT SESSIONS IACA AND PROFESSIONALISM

IACA and Professionalism have proposed topics for joint sessions which cover fields that are of common interest. These sessions are organized jointly by IACA and Professionalism aiming at a reciprocal exchange of knowledge and experiences. Not only submissions related to both sections but also submissions that cover specific aspects related to IACA and/or Professionalism only are highly welcome.

- Presentation Skills and Visual Communication
 - Data Security and Cyber Risks
 - Project Management
 - Actuarial Audits
 - Document Retention Policies
 - Expert Witness Work
-

EDUCATION

Education deals with different current and future topics on (continuing) qualification of actuaries. There will be a broad and interesting program, even though Education is not part of the Call for Papers.

CONTACT ICA 2018

Please send your questions regarding the Call for Papers as well as the ICA 2018 Scientific Program to callforpapers@ica2018.org



AWARDS AND PRIZES

A special highlight in the scientific program will be the Award Sessions. These sessions offer the ideal environment to present outstanding content to a large audience of actuarial professionals and renowned academics and scientists from all over the world. In order to get particular attention, the awarded sessions will be highlighted in the scientific program. Award sessions take place on each day of the ICA 2018.

BEST PAPER AWARDS

The Scientific Committee will award a number of Best Paper Awards in six given subject areas. After consideration of all submissions, the Scientific Committee will decide on the number of awards and the respective cash prizes of up to € 1,500 for each subject area.

The subject areas are:

- Big Data Analytics – Algorithms, Analysis and Application
- Demographic Change and Longevity
- Aspects of Long-Term Savings: Uncertainty in Low Real Returns, Longevity and Inflation
- Behavioural Aspects of Insurance Mathematics
- Long-Term Risk: Modelling, Measuring, Managing and Economic Valuation
- Mathematical Aspects of Emerging Risks.

The Best Paper Awards honour excellent contributions to the ICA 2018. Every ICA participant is eligible to compete for the Best Paper Awards by submitting a paper in accordance with the submission procedures. The prizes will be awarded in special sessions during the congress in Berlin.

Submissions must meet the following additional requirements:

- Submitted papers have not been already accepted for publication in a scientific journal prior to submission.
- Submitted papers must be written in English and may not exceed 40 pages.

ICA participants wishing to compete for a Best Paper Award should submit, in addition to the regular abstract submission, a full paper of their results in pdf format using the ICA online submission tool on <http://www.ica2018.com/wp/program/bestpaperaward> from 1 February 2017 and no later than 31 July 2017.

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IAA SECTION BEST PAPER AWARDS

Besides the Best Paper Awards in the six given topics, each Section of the IAA,

- AFIR/ERM (Financial Risk & ERM)
- ASTIN (Non-Life)
- IAAHS (Health)
- IAALS (Life)
- IACA (Consulting)
- PBSS (Pension Benefits & Social Security),

will also award Best Paper Awards in their subject areas.

The IAA Sections announce, organize and select the award winner independently from all submissions and/or all talks that form part of the scientific program of ICA 2018. By participating in the ICA 2018 Call for Papers process, authors automatically enter the selection procedure. Prize winners will be awarded a prize of with € 1,000 each.



YOUNG RESEARCHERS PROGRAM

The scientific program of ICA 2018 will offer three formats that are particularly suitable for the active participation of academics at the beginning of their careers. In addition to young scientists, ICA 2018 also hopes to attract senior academics and practitioners who want to investigate current “hot topics”.

INNOVATION PLATFORM

The Innovation Platform is a forum that allows the discussion and further development of novel and unusual ideas to address current problems in insurance.

Three young researchers and three practitioners present innovative approaches to relevant issues in the context of „emerging risks“. Each presentation lasts 10 minutes. Afterwards, the audience will choose two approaches and discuss these in subsequent workshops. The results of these workshops will be presented to the audience.

The Innovation Platform is expected to take place on Tuesday.

SUMMER SCHOOL

The Summer School is a short series of lectures within the ICA that clarifies the foundations underlying current actuarial research and practice.

The Summer School will cover the economically important and mathematically challenging topic “market consistent valuation of liabilities“. Academics and practitioners are to give the talks, which will also be recorded and provided online.

Two sessions lasting 90 minutes are expected to take place on Monday and Wednesday.

DEEP DIVE

The Deep Dive is intended to complement the program by providing further background on a hot topic.

The Deep Dive will cover the economically relevant and mathematically challenging topic „designing and pricing annuities and LTC products in a stochastic environment“. It will be in the form of a 90-minute discussion session that goes into the details of the corresponding “regular” ICA presentation.

Both the regular session and the Deep Dive will be recorded and provided online. The introductory and follow-up online sessions will introduce key ideas and summarise important aspects of the Deep Dive.

BURSARY PROGRAM

All formats will take place in the first half of the ICA 2018 congress week in order to enable those attendees who are joining the congress for three days only to participate as well.

In addition, ICA 2018 will offer a bursary program for young academics. The details of the program will be announced by the middle of 2017.



ONLINE SESSIONS

The online sessions of the Virtual ICA 2018 consist of three modules. These modules add up to more than four hours of CPD giving speakers a much greater freedom to present a comprehensive insight into the central topic of the session than a single 45-minute presentation would allow. Hence, participants can gain a comprehensive overview on the underlying theory and a deeper understanding of the presented results.

During the preparation module, the lecturer introduces the participants to the fundamentals of the central topic and explains special aspects in greater depth, which are relevant for the actual live presentation. The underlying motivation is to prepare the participants as well as possible. Everyone who has participated in the first module will be able to fully understand the live presentation of the second module.

Materials provided by the speakers are self-study material and further presentations as well as recorded sessions (videotaped presentations with oral explanations). Links to related papers or other literature enable interested participants to further study any aspects they are interested in.

Because the audience will have been prepared by the preliminary module, the live presentation in the central

module offers the possibility to focus on the most interesting results and to spend more time on examples illustrating the underlying theory. Furthermore, conducting the live presentation as a webcast independently of the congress schedule in Berlin allows a timetable that also suits participants living in different time zones.

The same holds for the Question & Answer webcast. Since it takes part three to four days after the live presentation, participants are able to re-examine the lecture's content and submit written questions for the webcast. In addition, this enables the speakers to prepare the answers accordingly and to give a comprehensive answer during the webcast.

Authors interested in preparing an online session for Virtual ICA 2018 can indicate this during the submission procedure.

SCHEME ONLINE SESSIONS

Module 1	Module 2	Module 3
Preparation phase with self-study materials	Broadcast of live presentation	Question & Answer webcast
<ul style="list-style-type: none"> • Presentations • Articles • Recorded Sessions • Links to further materials 	<ul style="list-style-type: none"> • Live stream from Berlin or • Independent webcast 	<ul style="list-style-type: none"> • Webcast with speakers and other participants
Weeks 1 & 2	Week 3	Week 4



SOCIAL PROGRAM

LIMITED ATTENDANCE EXPERIENCES

As an alternative to the excursions on Tuesday and Thursday afternoon, ICA 2018 delegates can also attend one of twelve limited attendance experiences. In small groups of a maximum of 50 people, participants get the chance to meet and discuss actuarial content off the beaten track. 12 events in seven exceptional venues in Berlin are available.

Allianz Forum: Located at the Pariser Platz the Allianz Forum provides a spectacular view over Berlin's most popular landmark, the Brandenburg Gate. There is probably no more central conference venue in Berlin.

Classic Remise Berlin: For all automotive fans, the Classic Remise – a centre for vintage cars – will be the place to be. Delegates can listen to a scientific talk and enjoy the industrial architecture in combination with historic and classic vehicles.

Lecture Hall Ruins of the Berlin Museum of Medical History: The Lecture Hall ruins are part of the Museum of Medical History of the well-known German university hospital, Charité. The exhibition tour, prior to the scientific talk, covers more than 300 years of medical history.

Museum of Technology: The German Museum of Technology is a place for exploration. Prior to the scientific talk, attendees can visit the exhibitions covering rail transport, aviation and shipping. Interesting facts and figures and a wide range of old and new technologies inspire several hundred thousand visitors every year.

Feuersozietät: Boasting 300 years of history in 2018, the Feuersozietät is the second oldest insurer in Germany. For their anniversary, the company will host two of the twelve limited attendance experiences during the ICA 2018. Attendees can expect an interesting, unique and special event. All details are still being kept secret, but it will certainly be worth a visit.

Museum for Communication: Founded in 1872 the Museum for Communication in Berlin is the oldest postal museum in the world. Visitors can go on a journey from the very beginnings of communication until today. In the museum's treasury, valuable exhibits and highlights such as the famous misprints, the blue and red Mauritius, await the visitor.

Ottobock Science Center: The Ottobock Science Center is a highlight in many ways. At first glance, it is the architecture with its modern façade that catches the visitors' attention straight away. But also the exhibits are fascinating. Several interactive multimedia devices invite the visitors to participate. Drive a wheelchair through a virtual course at the Brandenburg Gate or balance over a virtual deep ravine. This limited attendance experience is challenging.

Apart from the scientific talk, participants will explore the venue in an exclusive guided tour. The limited attendance experiences are free of charge for all ICA 2018 attendees.



SOCIAL PROGRAM

EXCURSIONS

After the scientific program has finished on Tuesday and Thursday afternoon, ICA 2018 delegates are invited to join several guided tours through Berlin, Germany's famous and vibrant capital.

Six different excursions are available. The "History Tour" focuses on several sights of Germany's long and eventful past. The "Jewish Heritage Tour" takes participants to the most important places and points of interest during different periods of Berlin's history. "Berlin by bus and boat" combines a comfortable bus trip through the city with a relaxing ride down the river Spree. The "Highlight Tour" will pass by the most famous sights in Berlin. Participants can get off the bus at the Brandenburg Gate and Checkpoint Charlie to take a personal souvenir photo.

And there are also tours for frequent visitors. "Berlin – its hidden places" shows the secret spots in town. Get to know Kreuzberg, Berlin's notorious and multicultural neighbourhood, and try the famous Berliner Currywurst. The tour "Modern Architecture" brings participants to

the famous landmarks and impressive modern buildings – a must see for anyone interested in architectural achievements. These excursions as well as the other social events are included in the congress fee.



EVENING EVENTS

As part of the ICA 2018 delegates can also join different evening events. Come together at the Welcome Event on Sunday, get closer at the Garden Event on Tuesday and stay in touch with our Fairwell Event on Thursday.

The "Welcome Event" will take place on Sunday 3 June 2018, at the Museum für Naturkunde in Berlin. With a theme of "Humboldt meets Gauss", delegates will get interesting information about biological and geological evolution as well as biodiversity and what connects them to mathematics. Exclusive insights in the museum and a dinner next to brachiosaurus brancai, the tallest mounted dinosaur skeleton in the world, will make this event an unforgettable experience for all ICA 2018 participants.

Two days later, on Tuesday 5 June 2018, the full and first half week attendees are welcome to join the "Garden Event" in the Estrel summer garden. Freshly barbecued food, cold drinks and relaxing music offer the perfect atmosphere to network with colleagues and to establish new professional contacts. A great way to finish the second congress day ICA 2018.

The final entertaining evening event will take place on Thursday 7 June 2018 in the Kalkscheune, a former Ger-

man machine factory. At the ancient funfair of the farewell event, visitors can enjoy various booth activities, fun games and feel the taste of the old Berlin of the 1920s. Could there be a better way to sweeten your farewell?





BERLIN

Expressive, multicultural, friendly, vibrant and historical – these are all adjectives that are closely linked to Berlin. With approximately 3.5 million inhabitants, Berlin is the capital of, and the largest city in, Germany. Berlin is the second largest city in the European Union in terms of inhabitants. However, not only these key figures make Berlin special.

Berlin looks back on an eventful history of more than 750 years. Various historic episodes have left marks on the face and the atmosphere of the city: The Brandenburg Gate, Victory Column, Olympic stadium or the Urania World time clock. These and other monuments and memorials remind visitors of the city's lively past.

Nowadays, Berlin is an open-minded city, a melting pot for many cultures. More than 190 nationalities represented in the city shape the metropolis in many ways. This is also reflected in the cultural life. 175 museums, 140 theatres, 300 private or municipal galleries and 300 cinemas demonstrate that Berlin is an excellent destination when it comes to art and culture.

Around 12.5 million people visit the German capital every year – and the visitor numbers are increasing. From the famous landmark the Brandenburg Gate, the symbol for division and unification of Germany, to the Reichstag, the seat of the German government – the city has many interesting sights to offer. One highlight – and also a historic location – is the Museum Island which contains five internationally-renowned museums, e.g. the Pergamon Museum with the famous monumental construction Pergamon Altar. Last but not least, many beautiful parks and gardens with impressive stately homes such as like Charlottenburg Palace or Sanssouci Palace attract many visitors every year.

Apart from the cultural sights, Berlin is also a culinary hotspot. Around 4,500 restaurants serve almost every type of food. One particularly famous Berlin dish is the Currywurst, a fried sausage with spiced tomato sauce.

There are numerous restaurants where you can try Currywurst. It is a dish definitely not to be missed when visiting Berlin.

With 195 meetings for associations in 2015, Berlin has risen to the top of the annual International Congress and Convention Association's (ICCA) host city ranking. It is the central location in the heart of Europe and it is its unique mixture of traditional and modern, of art and culture, that makes Berlin so popular.

The ICA 2018 will be held in the ESTREL, the largest hotel in Germany. The Congress Centre alongside the ESTREL covers a space of 269,000 sq ft – roughly the size of two football pitches. Enough space to hold the various parallel sessions during the ICA 2018 – up to 11 lectures will be held at the same time. There couldn't be a better city nor a better location to hold the 31st International Congress of Actuaries 2018.



FEES

FEES AND PACKAGES

Registration for the ICA 2018 will open on 1 December 2017. All speakers will receive a discount on the regular ticket fee for a full or a half week ticket. Registration includes admission to the scientific sessions as well as the social program. The attendance fee shall be understood per person plus, where applicable, the statutory Value Added Tax valid at the time in question.

DELEGATE

FULL WEEK	Early Bird 1 1 December 2017 – 31 January 2018	Early Bird 2 1 February 2018 – 31 March 2018	Regular 1 April 2018 – 3 June 2018
Regular	€ 1,380	€ 1,505	€ 1,630
Discount	€ 1,280	€ 1,390	€ 1,505

HALF WEEK	Early Bird 1 1 December 2017 – 31 January 2018	Early Bird 2 1 February 2018 – 31 March 2018	Regular 1 April 2018 – 3 June 2018
Regular	€ 835	€ 910	€ 985
Discount	€ 775	€ 840	€ 910

ACCOMPANYING PERSONS

	Early Bird 1 1 December 2017 – 31 January 2018	Early Bird 2 1 February 2018 – 31 March 2018	Regular 1 April 2018 – 3 June 2018
Full week	€ 380	€ 470	€ 550
Half week	€ 235	€ 290	€ 340

FURTHER INFORMATION?

Up-to-date information on the scientific and social program can be found on www.ica2018.org and in the monthly newsletter. Subscribe via the website.



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