

New Frontiers of Liability Risks: The Challenges of Insuring New Technologies

GENERAL INFORMATION | 12th Annual Liability Regimes Conference MUNICH | 17–18 NOVEMBER 2016



The Geneva Association

The Geneva Association is the leading international insurance think tank for strategically important insurance and risk management issues. The Geneva Association identifies fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector. Through the development of research programmes, regular publications and the organisation of international meetings, The Geneva Association serves as a catalyst for progress in the understanding of risk and insurance matters and acts as an information creator and disseminator. It is the leading voice of the largest insurance groups worldwide in the dialogue with international institutions. In parallel, it advances— in economic and cultural terms—the development and application of risk management and the understanding of uncertainty in the modern economy.

The Geneva Association membership comprises a statutory maximum of 90 chief executive officers (CEOs) from the world's top insurance and reinsurance companies. It organises international expert networks and manages discussion platforms for senior insurance executives and specialists as well as policymakers, regulators and multilateral organisations.

Established in 1973, The Geneva Association, officially the 'International Association for the Study of Insurance Economics', is based in Zurich, Switzerland and is a non-profit organisation funded by its members.

General information

Annual Liability Regimes Conference | *New Frontiers of Liability Risks: The Challenges of Insuring New Technologies* | Munich | 17–18 November 2016

The Geneva Association

Talstrasse 70, CH-8001 Zurich | Tel: +41 44 200 49 00 | Fax: +41 44 200 49 99

secretariat@genevaassociation.org www.genevaassociation.org

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Introduction

I am very pleased to welcome you to The Geneva Association's 12th Annual Liability Regimes Conference.

Our meeting this year will discuss some of the key liability issues arising from new and emerging technologies. The pace and impact of technological change is remarkable and a number of new technologies are creating risks that pose both new challenges and new opportunities for insurers. But risks represent a new business opportunity only if their scope and scale can be encompassed in new policies. Furthermore, new risks are also being tested against existing policy wordings that were never written to address them.

Our meeting this year brings together leading academics, legal experts and industry specialists to discuss the liability challenges and dynamics caused by new technologies and to discuss the ways in which they will shape, or be shaped by, insurance.

On behalf of The Geneva Association and the meeting's participants, I would like to thank our Member Nikolaus von Bomhard and the staff of Munich Re for hosting this meeting.



Anna Maria D'Hulster

Secretary General The Geneva Association

Programme

Day 1 | Thursday 17 November

10.30–11.00 Registration

11.00–11.30 *Welcome*

Nicholas Roenneberg, Liability Regimes Project Manager, The Geneva Association Christian Fuhrmann, Chief Executive Global Clients/North America , Munich Re

 11.30–12.30
 Keynote Speech: Risks and Risk Awareness Regarding New Technologies

 Ortwin Renn, Institute for Advanced Sustainability Studies, Potsdam

12.30–14.00 Buffet Lunch

14.00–15.45Session 1: Industry 4.0 – Industrial Applications of the Internet-of-Things, Munich Re
Chaired by Christian Fuhrmann, Chief Executive Global Clients/North America, Munich Re

Panel:

Hans-Jörg Bullinger, Fraunhofer-Institutszentrum Stuttgart Thomas Hemker, Security Strategist, Symantec Sebastian Lach, Partner, Hogan Lovells LLP

Content:

Industry 4.0 describes the ongoing "fourth industrial revolution", which will result in smart factories, where cyber physical systems communicate and cooperate with each other and humans in real-time over the Internet-of-Things to provide services and make production processes more efficient. The session will discuss:

- i) New liability risks as a consequence of this development
- ii) Options and challenges for liability insurers in the era of Industry 4.0

15.45–16.00 **Coffee Break**

16.00–17.45 Session 2: Cyber Risks and Accumulation Issues, Swiss Re

Chaired by Maya Bundt, Head Cyber & Digital Strategy, Reinsurance, Swiss Re

Panel:

Michael Bartsch, co-founder of 'Swiss Cyber Experts' and board member of the 'Zukunftsforum Öffentliche Sicherheit' Christian Biener, Project Manager & Postdoctoral Researcher, Institute of Insurance Economics (I.VW), University of St.Gallen Andrew Newman, Co-President and Global Head of Casualty, Willis Re Eric Schuh, Head Casualty Centre, Swiss Re

Content:

This session will explore the accumulation potential related to Cyber risk. We will explore this topic from different perspectives including that of an insurer, a reinsurer and society. We will engage in dialog with topical experts from these areas as well as colleagues from a leading University. Cyber accumulation happens in different ways including:

i) Many insureds are hit by a common cyber event

ii) Different insurance covers are triggered by a single event (liability, property, D&O)

(...Continued on next page)

Given the rapidly changing Cyber risk landscape, quantification and risk management are especially challenging and require new approaches. We will explore this topic to manage this risk for our industry and broader society.

19.00–22.00 Aperitif and Conference Dinner Geisels Vinothek, Hubertus Salon, Schützenstr. 11, 80335 Munich

Day 2 | Friday 18 November

09.00–10.45 Session 3: Emerging Liability and Regulatory Issues for Unmanned Aerial Vehicles, State Farm Chaired by Kevin Frederick, Vice President - Counsel, State Farm Mutual Automobile Insurance Co.

Panel:

André Clot, Director, EuroUSC Laura A. Foggan, Partner, Wiley Rein LLP Mark Sacco, Exposure Manager & Vice President, Aviation Lines, XL Catlin Patrick Slomski, Partner, Clyde & Co LLP

The session will discuss:

i) The regulatory & legal arena—how it enables and affects this developing technology
 ii) The operational landscape—who is using this technology — what are the risks/benefits and associated considerations

iii) The underwriting front line—coverage opportunity and exposure environment

The session will look at this subject through a dual lens of what is happening today and what the future may look like

10.45–11.00 **Coffee Break**

11.00–12.45 **Session 4: Nanotechnology, Zurich Insurance Group** Chaired by Lorenzo Natale, Global Underwriting Manager Casualty, Zurich Insurance Group

Panel:

Jelena Buha, Risk Engineer, Zurich Insurance Group Georg Garnweitner, Technical University Braunschweig

Content:

Nanoparticles come in many different shapes and forms and have a very diverse range of technical applications. Some of the nanoparticles are already used on industrial scale and found their way into consumer products. Others are still in developmental stages. Simultaneously, safety concerns for humans and environment are growing. As all new technologies, also nanotechnology raised some fears and (health) authorities are in the process of coming up with rules and regulations how to handle nanoparticles. The session will discuss:

- i) Introduction and definition of nanoparticles
- ii) Properties of nanoparticles
- iii) Commercial applications of nanoparticles
- iv) What the future may bring
- v) Regulatory environment
- vi) An attempt to assess the risk potential of nanoparticles

12.45–13.00 Wrap up & Conclusions

Nicholas Roenneberg, Liability Regimes Project Manager, The Geneva Association









Welcome



Nicholas Roenneberg

Liability Regimes Project Manager The Geneva Association



Christian Fuhrmann

Chief Executive Global Clients/North America, Munich Re

Nicholas Roenneberg studied law, history and Anglistics in Munich, Freiburg/ Breisgau and Geneva. After graduating he completed his legal training in Hamburg, where he also took his bar exam (Assessorexamen). In 1981 Nicholas Roenneberg joined Munich Re as a casualty underwriter. From 1988-1992 he was Head of Casualty Underwriting at Munich Re's US Branch in New York.

After returning to Munich, Nicholas Roenneberg became Head of Casualty Claims. From 2001 until his retirement in Dec. 2013 he was Head of the Divisional Unit Claims Management & Consulting. In this function, he was responsible for the Global Clients' Claims Divisions, Corporate Claims and Business Run-off. From 2000 until 2015 Vice-Chairman of the Supervisory Board of the European Centre of Tort and Insurance Law in Vienna. During his 30 year career at Munich Re he served in various executive positions both in underwriting and claims. From 1992 onwards he was responsible for the management and settlement of Munich Re's billion USD asbestos claims portfolio (predominantly US and UK exposures). He was inter alia responsible for settling the 9/11 claims on behalf of Munich Re and had oversight of all relevant litigation and arbitration procedures. For more than 10 years he had ultimate responsibility for all catastrophic losses, i.e. the quantitative and qualitative estimation of Munich Re's involvement and the management of the incurred claims.

From 2003 to 2014 he represented Munich Re on the committee of The Geneva Association responsible for organizing the "Annual Liability Regimes Conferences". He represented Munich Re from 2002 to 2014 on the advisory board of the German terrorism insurer Extremus. Since retirement from Munich Re in Dec 2013 Reinsurance Consultant and Arbitrator.

Project Manager for The Geneva Association since 2015.

Christian Fuhrmann has over 25 years of experience in insurance and reinsurance.

He graduated as a Lawyer from Ludwig-Maximilians-University, Munich, and is an admitted Attorney at Law in Germany. He holds a MBA in Financial Services and Insurance from the University of St. Gallen (Switzerland), Universiteit Nyenrode (Netherlands) and Vlerick Leuven Gent Management School (Belgium). He began his career in primary insurance and worked as a facultative liability underwriter, specializing in the reinsurance of industrial risks and U.S. linked business. Later on Mr. Fuhrmann assumed responsibility for managing the facultative liability department which underwrote business in the United Kingdom, the Netherlands, Scandinavia, the CEE countries, Greece and Cyprus. In 1999 Mr. Fuhrmann became a Member of the Executive Management of Munich Re. From thereon he served as Client Executive and Head of Casualty Treaty within Munich Re's Global Clients Division.

Effective January 1, 2009, he became Chief Executive of Munich Re's Divisional Unit, Casualty/Marine Global Clients/North America (GC/NA1). Since April 22, 2009 he has served as Member of Munich Re's Supervisory Board, too.

Keynote Speech: Risks and Risk Awareness Regarding New Technologies



Ortwin Renn

Scientific Director Institute for Advanced Sustainability Studies. Potsdam

Dr. Ortwin Renn is scientific director at the International Institute for Advanced Sustainability Studies (IASS) in Potsdam (Germany) since February, 1, 2016. He continues to serve as acting chair of the Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies at the University of Stuttgart (ZIRIUS) and as scientific director of the non-profit company DIALOGIK, a research institute for the investigation of communication and participation processes. Renn is Adjunct Professor for "Integrated Risk Analysis" at Stavanger University (Norway) and Affiliate Professor for "Risk Governance" at Beijing Normal University.

Ortwin Renn has a doctoral degree in social psychology from the University of Cologne. His career included teaching and research positions at Clark University (Worcester, USA), the Swiss Institute of Technology (Zuerich) and the Center of Technology Assessment (Stuttgart). His honours include the National Cross of Merit Order, an honorary doctorate from the Swiss Institute of Technology, an honorary professorship at the Technical University Munich and the "Distinguished Achievement Award" of the Society for Risk Analysis (SRA)



Session 1: Industry 4.0 – Industrial Applications of the Internet-of-Things

Chaired by Christian Fuhrmann, Chief Executive Global Clients/North America, Munich Re



Hans-Jörg Bullinger

Fraunhofer-Institutszentrum Stuttgart **Dr. Hans-Jörg Bullinger** was born in Stuttgart. He began his career working as a manufacturer for the Daimler-Benz company in Stuttgart, after which he obtained a degree at the University of Stuttgart, graduating with a Master's degree and Ph.D. in Manufacturing. After two years of lecturing at the University of Hagen, Dr. Bullinger was asked to become a full-time lecturer at the University of Stuttgart. Besides his role as chairman of the University, Dr. Bullinger was also the head of the Institute for Human Factors and Technology Management (IAT) and the Fraunhofer-Institute for Industrial Engineering (IAO). From October 2002 until October 2012 he was President of the Fraunhofer-Gesellschaft, Corporate Management and Research and alternates afterwards to the Senate of the Fraunhofer-Gesellschaft.

Dr. Bullinger received several honorary doctorates and awards like »Knight Commander's Cross of the Order of Merit of the Federal Republic of Germany« from the Federal President of Germany, was awarded »Manager of the Year« by the German manager magazine in 2009 and honoured with the »Grashof -Dekmünze« by VDI (The Association of German Engineers) in 2011. Dr. Bullinger received the »Leonardo - European Corporate Learning Award« 2012 and was 2013 affiliated to Germany-based manager magazine's »Hall of Fame of German research«.

Dr. Bullinger was a member of several councils like the High-Level Group on Research, Innovation and Science Policy Experts (RISE) of the European Commission and was one of the two chairmen of the Industry-Science Research Alliance of the Federal Ministry of Education and Research (2006-2013), which has helped to implement the High-Tech Strategy for Germany. Dr. Bullinger is a Fellow of UK's Royal Academy of Engineering.

At present, the Fraunhofer-Gesellschaft maintains 67 institutes and research units. The majority of the nearly 24,000 staff are qualified scientists and engineers. With its clearly defined mission of application-oriented research and its focus on key technologies of relevance to the future, the Fraunhofer-Gesellschaft plays a prominent role in the German and European innovation process.



Christian Fuhrmann

Chief Executive Global Clients/North America, Munich Re Christian Fuhrmann has over 25 years of experience in insurance and reinsurance.

He graduated as a Lawyer from Ludwig-Maximilians-University, Munich, and is an admitted Attorney at Law in Germany. He holds a MBA in Financial Services and Insurance from the University of St. Gallen (Switzerland), Universiteit Nyenrode (Netherlands) and Vlerick Leuven Gent Management School (Belgium). He began his career in primary insurance and worked as a facultative liability underwriter, specializing in the reinsurance of industrial risks and U.S. linked business. Later on Mr. Fuhrmann assumed responsibility for managing the facultative liability department which underwrote business in the United Kingdom, the Netherlands, Scandinavia, the CEE countries, Greece and Cyprus. In 1999 Mr. Fuhrmann became a Member of the Executive Management of Munich Re. From thereon he served as Client Executive and Head of Casualty Treaty within Munich Re's Global Clients Division.

Effective January 1, 2009, he became Chief Executive of Munich Re's Divisional Unit, Casualty/Marine Global Clients/North America (GC/NA1). Since April 22, 2009 he has served as Member of Munich Re's Supervisory Board, too.



Thomas Hemker

Security Strategist Symantec **Thomas Hemker** is Security Strategist at Symantec with over 20 years of experience in information security. When joining the company in 2010, he also became part of the Symantec CTO Office and is responsible for exchanging ideas with security professionals in the corporate world, the public sector, and actors of the security industry in general. He advises customers regarding their security strategy, cyber resilience, current threat scenarios and technological development.

Prior to his position at Symantec, Thomas Hemker was in charge of the Central-European presales department at PGP (PGP Deutschland AG). He also gathered experience as a systems engineer, consultant and product manager at Network Associates and a security distributor, with a focus on encryption, PKI and key management, as well as network security and analysis (Firewall, IDS/ IPS).

Furthermore, Thomas Hemker is a distinguished speaker at security conferences and holds several security industry certifications, for instance the Certified Information Systems Security Professional (CISSP), the Certified Information Security Manager (CISM) and Certified Information Systems Auditor (CISA). He represents Symantec at the ISF, TeleTrust e.V. and Bitkom and is a member of ISACA and (ISC)2, where he cofounded the (ISC)2 Chapter Germany and serves as member of the board.





Sebastian Lach

Partner Hogan Lovells LLP **Sebastian Lach** helps guide companies though complex product liability and product safety issues. He is listed as "being among Germany's leading business lawyers in the area of Product Liability Defense" (Who's Who Legal Germany 2016). He is praised by competitors as "highly competent and goal-driven" (JUVE 2016).

Sebastian has experience in defending product liability cases in over 70 countries, including class actions, and has represented clients at more than 100 court hearings, including before the German Supreme Court and in references to the European Court of Justice. He provides support with on-site trial preparation, including witness and expert preparation. He has handled numerous multi-jurisdictional supply chain disputes.

Sebastian also has extensive experience advising on product safety. He has conducted over 50 recalls for clients, the vast majority of them international. He advises on strategic and scientific issues, crisis management and the implementation of European legal and regulatory requirements.

Session 2: Cyber Risks and **Accumulation Issues**



Michael Bartsch

co-founder of 'Swiss Cyber Experts' and board member of the 'Zukunftsforum Öffentliche Sicherheit'



Christian Biener

Project Manager & Postdoctoral Researcher Institute of Insurance Economics (I.VW) University of St.Gallen

Chaired by Maya Bundt, Head Cyber & Digital Strategy, Reinsurance, Swiss Re

Michael Bartsch: has been active for many years as a crisis manager for cyber attacks. He advises companies and governments during the whole process of a cyber attack: before, during and after. As the founder of two public private partnerships in Germany and Switzerland, he is committed to fighting cyber crime. He has a deep insight and knowledge of the "modus operandi" of cyber criminals. He will assist you in the entire process from prevention to reaction to continuity after a cyber attack and help develop and implement your cyber strategy.

Dr. Christian Biener is an applied empirical and behavioral economist at the Institute of Insurance Economics of the University of St. Gallen (Switzerland). His main fields of research include risk and ambiguity preferences, information asymmetries, insurance choices, microinsurance, pro-social preferences, risk modeling, cyber risk, and issues of firm performance and regulation. Dr. Biener has published in leading international academic journals. He manages a number of basic research and industry projects among which are projects funded by the Swiss National Science Foundation (SNSF) and advisory mandates from the Swiss Agency for Development and Cooperation (SDC), the Casualty Actuarial Society (CAS), the Swiss Insurance Association (SIA), and the Global Federation of Insurance Associations (GFIA). In 2014 he received the Shin Research Excellence Award awarded by the Geneva Association and the International Insurance Society (IIS) for his work on cyber insurance. He received his doctoral degree (summa cum laude) in 2011 from the University of Ulm (Germany).





Maya Bundt is the Head Cyber & Digital Strategy at Swiss Re Reinsurance. In this role she is responsible to further develop and implement the Reinsurance cyber risk strategy and to drive digital innovation and initiatives. Maya joined Reinsurance from Group Strategy, where she was Chief of Staff of Group Strategy to the Group's Chief Strategy Officer. Before she joined the Group Strategy team, Maya held a position in the Information Technology Division of Swiss Re. Maya joined Swiss Re from The Boston Consulting Group where she spent 3 years as a strategy consultant serving a variety of industries. Maya holds a PhD in Environmental Science from the ETH Zurich.

Maya Bundt

Head Cyber & Digital Strategy, Reinsurance Swiss Re



Andrew Newman

Co-President and Global Head of Casualty Willis Re **Andrew Newman** is the co-President of Willis Re, Chief Executive Officer of Willis Re Alternative Strategies and Global Head of Casualty embracing all long tail classes. He is a member of the Willis Re Operating and Executive Committees which are responsible for Willis Re's strategy, sales, growth, client management and service offering

Andrew joined Willis Re in 2009 as an Executive Vice President and Managing Director. Prior to joining Willis Re, he spent 18 years at RK Carvill where he was responsible for North American Casualty and Specialty business.

Prior to joining Carvill, Andrew spent 10 years at CT Bowring, now a part of Marsh, and helped form Marsh's specialist Financial and Professional Lines business now known as "Finpro".



Eric Schuh

Head, Casualty Centre Swiss Re

Eric Schuh joined the Swiss Re Group in Beijing in 2008 as Director of Business Development for China. Two years later, he became Head of Business Development for Asia. In 2011, he was appointed as Swiss Re's Head of Investor Relations, based in Zurich. In August 2014, Eric Schuh was appointed as Head Casualty Centre in the Casualty Division.

Prior to joining Swiss Re, Eric Schuh was Head of Investor Relations at DEPFA Bank in London and before that Head of Corporate Communications at Hannover Re in Germany. After university, he briefly worked in Beijing for Credit Suisse and then joined JPMorgan in London in 2001 as an equity analyst in the insurance team.

Eric Schuh is a Chartered Property Casualty Underwriter and Chartered Financial Analyst. He holds a Master's degree in Economics from University of Tübingen, where he also studied Mandarin Chinese. Eric Schuh also spent a year at University of Washington in 1999 as a Fulbright scholar and graduate student of International Studies.



Session 3: Emerging Liability and Regulatory Issues for Unmanned Aerial Vehicles

Chaired by Kevin Frederick, Vice-President - Counsel, State Farm Mutual Automobile Insurance Company



André Clot

Director EuroUSC **André Clot** is the Centre Director for EuroUSC[™] which provides safety and risk assessments for airworthiness, Pilot Qualification and RPAS Operations to a set of specialised RPAS standards used in over 20 countries.

Andre became the General Secretary of the first RPAS Trade Association in 1999 and its chairman from 2008 to 2010 instrumental in the early development of United Kingdom RPAS regulation - CAP 722. From 2002-2003 he was the rapporteur for the Safety and Security working group of the JAA/Eurocontrol UAV Task Force whose report formed the basis of the European Aviation Safety Agency (EASA) early work.

André is a former chairman of the Royal Aeronautical Society's UAS Specialist Group and former Vice Chairman of EUROCAE WG93 on Light RPAS Standards.

André is currently an advisor to Eurocontrol on the International Civil Aviation Organisation Authority (ICAO) RPAS Panel working on RPAS Concepts of Operation as well as to the Joint Authorities for Unmanned Aircraft Systems working on Operational Safety Risk Assessment which is led by FOCA, the Swiss CAA, He is a Non Executive Director of UVSI International and Chairman of the Association of Qualified Entities.



Laura A.Foggan

Partner Wiley Rein LLP **Laura Foggan** leads the Insurance Appellate Group at Wiley Rein LLP. She is described by LawDragon 500 Magazine as "one of the most successful advocates for the insurance industry to ever practice" and recently was named Washington, DC Insurance "Lawyer of the Year" by Best Lawyers (2017). Laura handles a wide range of trial and appellate matters involving complex insurance claims. She has participated in more than 200 appeals nationwide and has made significant contributions to the development of key insurance law precedents across the United States.

In addition to her litigation work, Laura counsels insurers on emerging exposures, currently addressingissues such as newly-developing mass tort liabilities, cyber risk, privacy and data breach, and risks and opportunities relating to autonomous vehicles and the commercial use of unmanned aircraft systems ("UAS" or, more commonly, drones). Laura has assisted insurers in navigating the regulatory requirements to initiate programs for commercial use of UAS and studied UAS-related liability exposures.



Kevin Frederick

Vice President - Counsel State Farm Mutual Automobile **Kevin Frederick** is Vice President - Counsel for State Farm Mutual Automobile Insurance Company. He is responsible for all legislative and regulatory activity at the state and federal level, political law engagment, public policy development, as well as various business planning activities.

He joined State Farm in 1995, providing regulatory and anti-trust counsel to the Company's Underwriting and Actuarial Departments. In 1997, he assumed responsibility for the Company's legislative and regulatory matters in New Jersey and Pennsylvania. In 2006, as Associate General Counsel, Kevin established the Public Policy Resource Group within the Law Department to coordinate development of State Farm public policy positions, support legislative counsel in pursuit of the Company's legislative concerns, and help develop the Company's associate outreach efforts.

Prior to joining State Farm, Kevin worked in private practice with the law firm of McNees, Wallace & Nurick, in Harrisburg, Pa., where he focused on construction litigation and insurance regulatory law. He then assumed the roles of Department Counsel followed by Chief Hearing Officer for the Pennsylvania Insurance Department.

He was the founding director of Agents Helping Agents of Pennsylvania, a not-for-profit EAP style organization for independent insurance agents and has served on the boards of several insurance trade associates. He currently serves on the Leadership Council of the Griffith Foundation. He is admitted to practice in Pennsylvania, New Jersey (In-House), U.S. District Court for the Middle District of Pennsylvania, and Third Circuit Court of Appeals.



Mark Sacco

Exposure Manager & Vice President Aviation Lines XL Catlin After graduating in 1992 from Santa Clara University with a degree in Economics, **Mark Sacco** returned to his home town of Portland, Oregon. Mark had a lifelong dream of becoming a professional pilot, so in 1994, he began flight training. Within 2 years he had obtained a Commercial Pilot's License along with an Instrument Rating and Certified Flight Instructor License.

In 1997, he started his insurance career with U.S. Aviation Underwriters (USAU), where he specialized in underwriting general aviation operations. In 2007, Marsh gave him the opportunity to become an insurance broker, managing their aviation team in San Francisco. Mark joined the XL Catlin team in San Francisco in 2009, and is now a Regional Manager, with responsibility for a team that services brokers throughout the Western United States.

Mark has flown almost 1000 hours in light, single-engine, piston powered aircraft, throughout the Pacific Northwest and San Francisco Bay Area.





Patrick Slomski

Partner Clyde & Co LLP **Patrick Slomski** is a solicitor and partner in Clyde & Co's aviation and aerospace department, with 21 years' experience of the industry sector. Patrick's practice covers contentious and non-contentious aspects of the aerospace industry focusing on technical systems (civil and military; aviation and space based).

Patrick advises and represents UAS developers, users and insurers. He has lead the legal input in EC study programmes including: a study of UAS related legal liability and insurance, a review of civil aviation security framework and a development programme for the protection of civil aviation from terrorist deployment of MANPADS. Patrick's insurance related work focuses on technical claims advice and coverage in relation to aircraft and space systems.

Session 4: Nanotechnology



Chaired by Lorenzo Natale, Global Underwriting Manager Casualty, Zurich

Jelena Buha joined Zurich in early 2015. She is a Risk Engineer, currently responsible for the liability assessments in the Chemical, Pharma and Food areas of business. Jelena is also monitoring developments regarding global risks that have an impact on Zurich, such as in nanotechnology, counterfeit and is involved in internal and external projects for casualty cat modelling. Additionally, she is taking part in the Emerging Risk group of Swiss Insurance Association. Jelena holds a PhD in Material Science and has a Chemical Engineering background.

Jelena Buha Risk Engineer, Zurich Insurance Group



Georg Garnweitner Technical University Braunschweig

Georg Garnweitner completed his studies of Technical Chemistry at Vienna University of Technology (Austria) in 2003. He then moved to the Max Planck Institute of Colloids and Interfaces, Potsdam (Germany), and obtained a Ph.D. degree in Colloids Chemistry from the University of Potsdam in 2005 for his work on the "Nonaqueous Synthesis and Formation Mechanisms of Transition Metal Oxide Nanoparticles". In 2007, he was appointed as Junior Professor for Nanoparticles and Nanocomposites at the Institute for Particle Technology, Technische Universität Braunschweig (Germany). Since 2013, he holds a Full Professorship for Nanomaterials at Technische Universität Braunschweig. His research interests include the tailored chemical synthesis of inorganic nanoparticles as well as the stabilization and surface modification of nanoparticles for novel applications.





Lorenzo Natale

Global Underwriting Manager Casualty Zurich insurance Group **Lorenzo Natale** acts as Underwriting Manager Casualty at Zurich Insurance Company. He develops and implements underwriting and pricing strategies as well as business solutions (e.g. products, underwriting tools and processes) to improve underwriting performance and delivers plans of the Casualty Lines of Business on a worldwide basis. Lorenzo Natale joined Zurich in 2005 and had various roles since than within the Group. He started his career in the insurance industry back in 1986, since 1993 he is focussed on Casualty Lines of Business. His specialties are General Liability, Product Liability, Medical Malpractice, Construction Liability, Professional Indemnity, Product Recall, Worker's Injury and Employer's Liability.

Wrap up and Conclusions



Nicholas Roenneberg

Liability Regimes Project Manager The Geneva Association

Nicholas Roenneberg studied law, history and Anglistics in Munich, Freiburg/ Breisgau and Geneva. After graduating he completed his legal training in Hamburg, where he also took his bar exam (Assessorexamen). In 1981 Nicholas Roenneberg joined Munich Re as a casualty underwriter. From 1988-1992 he was Head of Casualty Underwriting at Munich Re's US Branch in New York.

After returning to Munich, Nicholas Roenneberg became Head of Casualty Claims. From 2001 until his retirement in Dec. 2013 he was Head of the Divisional Unit Claims Management & Consulting. In this function, he was responsible for the Global Clients' Claims Divisions, Corporate Claims and Business Run-off. From 2000 until 2015 Vice-Chairman of the Supervisory Board of the European Centre of Tort and Insurance Law in Vienna. During his 30 year career at Munich Re he served in various executive positions both in underwriting and claims. From 1992 onwards he was responsible for the management and settlement of Munich Re's billion USD asbestos claims portfolio (predominantly US and UK exposures). He was inter alia responsible for settling the 9/11 claims on behalf of Munich Re and had oversight of all relevant litigation and arbitration procedures. For more than 10 years he had ultimate responsibility for all catastrophic losses, i.e. the quantitative and qualitative estimation of Munich Re's involvement and the management of the incurred claims.

From 2003 to 2014 he represented Munich Re on the committee of The Geneva Association responsible for organizing the "Annual Liability Regimes Conferences". He represented Munich Re from 2002 to 2014 on the advisory board of the German terrorism insurer Extremus. Since retirement from Munich Re in Dec 2013 Reinsurance Consultant and Arbitrator.

Project Manager for The Geneva Association since 2015.



Munich RE

Munich Re

Host Company

Our business model is based on the combination of primary insurance and reinsurance under one roof. We take on risks worldwide of every type and complexity, and our experience, financial strength, efficiency and first-class service make us the first choice for all matters relating to risk. Our client relationships are built on trust and cooperation.

Munich Re stands for exceptional solution-based expertise, consistent risk management, financial stability and client proximity. In the financial year 2015, the Munich Re Group achieved a profit of \notin 3.1bn on premium income of \notin 50bn. It operates in all lines of insurance, with almost 43,000 employees throughout the world.

Reinsurance

With premium income of around €28bn from reinsurance alone, Munich Re is one of the world's leading reinsurers. Especially when clients require solutions for complex risks, Munich Re is a much sought-after business partner. Our roughly 12,000 staff in reinsurance possess unique global and local knowledge. Munich Re attaches great importance to its client service, which regularly receives top ratings.

Primary insurance

Our primary insurance operations are mainly concentrated in the ERGO Group AG. Worldwide, the Group is represented in over 30 countries and concentrates on Europe and Asia. ERGO offers a comprehensive spectrum of insurance, provision and services. In its home market of Germany, ERGO ranks among the leading providers across all segments. 43,000 people work for the Group, either as salaried employees or as full-time self-employed sales representatives. In 2015, ERGO recorded a premium income of €18bn.

Munich Health

Under the Munich Health brand, Munich Re combines its global healthcare knowledge in primary insurance and reinsurance with a premium income of €5,6bn in the financial year 2015. 3,000 experts located across the globe use this wealth of knowledge to offer our international clients innovative solutions and individual consultancy and services. Our unique business model means we can respond quickly and effectively to changes in local markets, thus ensuring the long-term success of our clients.

Asset management

The Group's worldwide assets of €215bn are managed by MEAG. The quality of our asset management proved its worth during the recent financial crisis, which Munich Re weathered with continued financial strength.

In addition, MEAG also offers its expertise to private and institutional clients. The volume of assets under management amounts to a total of ≤ 10.4 bn.

Read further:

https://www.munichre.com/en/group/company/portrait/index.html

The Geneva Association **Management Team**



Anna Maria D'Hulster

Secretary General The Geneva Association Anna Maria D'Hulster was appointed Secretary General of The Geneva Association by the membership on 2 June 2014.

Before joining The Geneva Association, she was responsible for the insurance practice at swissQuant Group, a technology company specialising in the development and implementation of mathematical algorithms and software for risk management and big data purposes.

From 2002 to 2012, she had different roles with the Baloise Group in Switzerland and Europe. She acted as Head of Group Risk Management from 2002 to 2004, and Head of Group Performance Management while also representing the Holding on the boards of various subsidiaries (from 2004 to 2008). She subsequently established and developed the life insurance company Baloise Life of which she became the CEO (2008 to 2012). Anna Maria was a member of the Executive Committee of the European Insurance Association (CEA/Insurance Europe) from 2009 to 2012.

Before her career in the insurance industry, Anna Maria was a Principal at the Boston Consulting Group, leading banking and insurance projects in Germany and the United States. She started her career as a corporate finance analyst at Deutsche Bank.

Anna Maria holds an INSEAD MBA (1993) and a business-engineering degree from the Free University of Brussels, Belgium. She is a Belgian citizen.

In 2014 Anna Maria was appointed as non-executive Director to the Board of Hardy (Underwriting Agencies) Ltd., London.





Fabian Sommerrock

Deputy Secretary General The Geneva Association **Dr Fabian Sommerrock** was appointed Deputy Secretary General and Head of Insight at The Geneva Association in August 2015. His responsibilities include the management of the research programmes on Financial Stability and Regulation, Extreme Events and Climate Risk, Global Ageing, Liability Regimes, the Protection Gap and Cyber with regular publications and international meetings. In addition, Dr Sommerrock manages the C-level networks (CROs, CIOs and Chief Economists) and academic relations (incl. The Geneva Papers on Risk and Insurance). Since 2010 he has held a visiting lectureship at the University of St. Gallen in the field of Marketing.

Prior to joining The Geneva Association, Dr Sommerrock was a Member of the Management Team at Roland Berger Strategy Consultants Switzerland, leading their insurance practice. He joined Roland Berger Strategy Consultants in 2005 and focused on the financial services industry and public services. He is an expert in strategy development, transformation, post-merger integration and reorganisation as well as efficiency improvements and change management. He has managed important projects for clients in the private and public insurance sectors for more than ten years.

Dr Sommerrock holds a Master's degree in Business Administration from University of Mannheim (Dipl.-Kaufmann) and studied Economic Policy at American University in Washington D.C. as a scholar of the Friedrich Naumann Foundation. He received his Ph.D. (Dr. rer. pol.) in Economics and Social Science from Kassel University (dissertation: successful post-merger integration in public institutions).

How to Find Munich Re



Munich Re main building "Großer Sitzungssaal" in the mainbuilding Königinstr. 107, 80802 Munich

Underground/Bus

Take the underground U3 or U6 and get off at Giselastrasse.

By car

From Leopoldstrasse, turn into Martiusstrasse. Follow this street, which becomes Thiemestrasse, then turn right into Königinstrasse.



Hotel Information

Hotel Königshof: a traditional luxury hotel

Karlsplatz 25 (Stachus), 80335 Munich

Phone: +4989551378194



Hotel Anna: a modern design hotel Schützenstr. 1, 80335 Munich

Phone: +4989551378195



Dinner Location



Geisels Vinothek (Hubertus Salon), inside the Excelsior Hotel Schützenstr. 11, 80335 Munich

Phone: +4989551370



Forthcoming Conferences



November

28–29 **12th Chief Risk Officer Assembly** Hosted by Munich Re, in Munich

2017 | March

- 02–03 **33**rd **Regulation and Supervision (PROGRES) Seminar** In Zurich
- 9–10 *Extreme Events and Climate Risk Conference* Hosted by SCOR, in Paris
- 22–23 **19th Meeting of The Geneva Association's Annual Circle of Chief Economists** Hosted by ACHMEA, in Zeist

May 11–12

2 **14**th **Annual Round Table of Chief Risk Officers (ART of CROs)** Hosted by MAPFRE, in Madrid



44th General Assembly of The Geneva Association Hosted by U.S. Members, in San Francisco (Members only)

22–23 **17**th **Joint Seminar of the European Association of Law and Economics and The Geneva Association** In Reykjavik, Iceland

> *If you have any questions or concerns, please contact: Loïc Frank* | *Head of Membership, The Geneva Association: Direct: +41 78 707 6261 Email: loic_frank@genevaassociation.org*

Recent Publications by The Geneva Association









An Integrated Approach to Managing Extreme Events and Climate Risks

This report provides insights about climate-related mounting social and economic risks, analyses obstacles to the insurance industry's contribution and makes recommendations on how to overcome some of these hurdles.

Read full report here: https://goo.gl/ONw1Wj

2016 General Assembly Review

This General Assembly Review is a retrospective on some of the key discussions in Rome at the 43rd annual General Assembly.

Read full report here: https://goo.gl/dPcrAc

Modernising Insurance Solvency Regimes

The report examines the commonalities and differences of global solvency regimes. It examines inter alia asset and liability valuation, how regulatory capital requirements are set, status of internal models, criteria for assessing capital resources.

Read full report here: https://goo.gl/vZCc3L

Insurance Sector Investments and Their Impact on Financial Stability— An Empirical Study

This report is the latest in a series of Geneva Association white papers initiated in 2009 that contribute a fact-based analysis for the global discussions on insurance and financial stability. This report uses empirical evidence to examine whether potentially procyclical behaviour alleged to come from the insurance industry in market downturns could be systemically relevant.

Read full report here: https://goo.gl/hAPlef



This booklet provides general information on the 12th Geneva Association Annual Liability Regimes Conference, held in Munich on 17–18 November 2016.

+ 0 1 HOMOLOH eva Association—'International Association for the Study of Insurance Economics' Talstrasse 70, CH-8001 Zurich | Tel: +41 44 200 49 00 | Fax: +41 44 200 49 99 The Geneva Associationsecretariat@genevaassociation.org