



# Exploring the risk, safety, security and resilience nexus

Society for Risk Analysis Nordic Conference

Stavanger 8.-9. november

**SEROS**  
Centre for Risk Management and Societal Safety

**U**  
University of Stavanger

**SRA**

## 7. NOVEMBER 2018

At the University of Stavanger  
Kjølv Egeland's hus

### PRE-CONFERENCE WORKSHOPS 16.15-19.00

#### A tutorial in quantifying uncertainty by probability

By Ullrika Sahlin, Lund University, Sweden

Location: Kjølv Egeland's hus, Room D301

#### Visualising and analysing public perceptions of risk and security using online tools

By Aiste Balžekienė, Kaunas University of Technology, Lithuania

Location: Kjølv Egeland's hus, Room D302

#### Gender perspectives in risk and societal safety

By Kristin Sørung Scharffscher, University of Stavanger, Norway

Location: Kjølv Egeland's hus, Room D303

#### Regulation and Standardization

By Ole Andreas Engen, University of Stavanger, and Jacob Kringen, The Norwegian Directorate for Civil Protection (DSB), Norway

Location: Kjølv Egeland's hus, Room C334

### SOCIAL GATHERING/RECEPTION 19.00-20.30

Location: the SEROS-corridor  
Kjølv Egeland's hus, University of Stavanger

20.30

Buss from University of Stavanger to Radisson Blu Atlantic Hotel

## 8. NOVEMBER 2018

At Radisson Blu Atlantic Hotel, Stavanger

8.30 - 9.00: Registration

9.00 - 9.30 Conference opening

Marit Boyesen Rector, University of Stavanger  
Welcome by SRA president Terje Aven

Introduction by chair Sissel H. Jore

9.30-10.30 Keynote speakers

Professor Seth Guikema:  
**Risk, Resilience, and Sustainability: Adapting to a Changing World.**

Professor Frederic E. Boudier:  
**Risk Policy in the 21st Century: Towards a safer world?**

10.30 - 11.00 Coffee break

**11.00 - 12.30 Parallel sessions I**

12.30 - 13.30 Lunch

13.30 - 14.45 **Parallel sessions II**

14.45 - 15.15 Coffee break

15.15 - 16.30 **Parallel sessions III**

16.30 - 16.45 Coffee break

16.45 - 17.45 Keynote speakers

Professor Genserik Reniers:  
**Safety and security in the chemical industry: A new paradigm and the vision for the future in the Netherlands.**

Professor Odd Einar Olsen:  
**The standardisation of risk versus the risk of standardization.**

17.45 SRA Nordic meeting

19.00 Conference dinner

Location: Kiellandsalen

## 9. NOVEMBER 2018

At Radisson Blu Atlantic Hotel, Stavanger

8.30 - 9.00: Registration

9.00 - 9.30 Keynote speaker

Professor Erik Hollnagel:  
**Black holes and dark matter in the safety universe.**

9.30 - 11.00 Roundtable

**The call for a shift from risk to resilience: What does it mean?**

Participants:  
Terje Aven (Chair)  
Frederic Boudier  
Seth Guikema  
Erik Hollnagel  
Genserik Reniers

11.00 - 11.15: Coffee break

11.15 - 12.30: **Parallel sessions IIII**

12.30 - 13.30: Lunch

13.30 - 14.30: Keynote speakers

Professor Karen Lund Petersen:  
**Bringing Security Into Risk Management**

The Norwegian Directorate for Civil Protection (DSB): Per Brekke:  
**A practitioners view on contributions from risk research**

14.30 - 14.45 Closing remarks

Chair Sissel H. Jore

15.00 End of conference

# PARALLEL SESSIONS

## PARALLEL SESSIONS I, THURSDAY 8. NOVEMBER

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### 1.1 Critical infrastructures and critical societal functions I (Pre-defined symposium): Chair Roger Flage

Location: Sølverget

- 65098 Flage, Roger: Conceptualisations of risk, vulnerability and related concepts in infrastructure research
- 64989 Johansson, Jonas: Addressing Cascading Consequences for Critical Infrastructure and Vital Societal Functions in Flooding Events
- 64918 Stødle, Kaia: Interdependent infrastructure system risk analysis of the real-world power and water distribution system at St. Kitts
- 64916 Johnson, Caroline: Characterising the robustness of power-law networks given spatially-correlated disruptions
- 64940 Hassel, Henrik: Challenges in the implementation of a risk and continuity management process for municipal critical societal functions

### 1.2 Applied risk assessments and management: Chair Willy Røed

Location: Atlantic Hall

- 64947 Botheju, Deshai: Effective Management of Risk Studies in Offshore Oil & Gas Industry
- 64903 Abdelmalek, Mohamed: Performance-Based Online Indicators of Safety Barriers at the Operations Phase of the Asset
- 65351 Rastayesh, Sima: Risk analysis for wind turbines near highways
- 64914 Guldåker, Nicklas: Different spatial visualization techniques for Fire prevention in Stockholm and Göteborg
- 64898 Carreras Guzman, Nelson H.: Identifying flows of information and energy in cyber-physical systems: A framework for safety risk analysis

### 1.3 Risk Perception and communications: Chair Frederic E. Boudier

Location: Valberget

- 65097 Sahlin, Ullrika: Are there individual differences in the ability to express uncertainty
- 65099 Bennett, Chris: Bending, breaking or fighting back: responses of some hospital staff to irreducible threats to patient safety
- 65337 Nilsen, Aud Solveig: What are new risks to come?
- 65354 Tarigan, Ari: Analysis of correlations between psychological factors and self-reported behavior of motorcyclists depending on self-reported usage of different types of motorcycle facilities in Malaysia
- 64946 Skotnes, Ruth Østgaard: Risk communication of invisible dangers

## PARALLEL SESSIONS II, THURSDAY 8. NOVEMBER

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### 2.1 Security and Safety: Chair Ole Andreas Engen

Location: Atlantic Hall

- 64983 Salmela, Laura: Analyzing risk in digitalized border management systems: the state of play
- 64901 Glesner, Colin: Safety and Security: two cultures?
- 65356 Ylönen, Marja: Decommissioning of nuclear power installations as a challenge to risk governance – call for a sociotechnical perspective
- 65091 Song, Guozheng: Probabilistic Assessment of Integrated Safety and Security Related Abnormal Events in Chemical Plants

### 2.2 Crisis and Emergency management: Chair Odd Einar Olsen

Location: Sølverget

- 65100 Olausson, Pär M.: Blackout ahead: Methodological Concerns in Studies of National Crisis Management
- 64905 Holtmanns, Silke: Information access in disaster areas
- 64896 Sørensen, Jarle Løwe: Norwegian Maritime Crisis Collaboration Exercises: Are They Useful?
- 64904 Kvarnlöf, Linda: Perspectives on Swedish household crisis preparedness: a research overview

## 2.3 Resilience: Chair Tor Olav Grøtan

Location: Valberget

- 65355 Grøtan, Tor Olav: Addressing the New Strains of Society in terms of hidden, dynamic and emergent vulnerabilities
- 64899 Stålhane, Tor: Agility and Resilience
- 64909 Stene, Lillian Katarina: How will different risk perspectives within naval organisations in the High North affect resilience?
- 64911 Thaheem, Muhammad Jamaluddin: Resilience vs Evolution: A bio-inspired debate

## PARALLEL SESSIONS III, THURSDAY 8. NOVEMBER

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### 3.1 Security: Chair Marja Ylönen

Location: Sølvberget

- 65346 Steen, Riana: On the application of safety 2 concept in a security context
- 64994 Slimani, Nizar: Coping with Uncertainty: Energy Securitization in the U.S. (2004-2014)
- 65336 Heyerdahl, Anne: Standardization of security risk analysis – the importance of ideas about risk and security
- 64949 Bongiovanni, Ivano: Antecedents, precursors, root causes: unpacking the deepest reasons for information security breaches

### 3.2 Risk management and governance: Chair: Aiste Balzekiene

Location: Atlantic Hall

- 64900 Taarup-Esbensen, Jacob: Managing community risk
- 65361 Cedergren, Alexander: How can the practical impact from municipal risk assessments be evaluated?
- 65084 Lehikoinen, Annukka: Dioxins in Baltic herring and salmon: a cross-sectoral decision analysis for optimal management of the problem

### 3.3 New perspectives in risk assessments and management: Chair Sakari Kuikka

Location: Valberget

- 64993 Kloza, Dariusz: Sketching the relationship between risk (management) and impact (assessment)
- 64950 Hausken, Kjell: Principal Agent Theory, Game Theory and the Precautionary Principle
- 64906 Raices Cruz, Ivette: Quantifying imprecision by bounds on probabilities
- 65349 Kuikka, Sakari: Need to know and need to do: value-of-information and value-of-control in Bayesian decision analysis

## PARALLEL SESSIONS IIII, FRIDAY 9. NOVEMBER

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### 4.1 Economic Analysis in Risk Management (Pre-defined symposium): Chair Eirik B. Abrahamsen

Location: Sølvberget

- 64894 Bansal, Surbhi: Return on Investment (ROI) for evaluating safety measures. Review and discussion
- 64907 Sørskår, Leif Inge Kjærvoll: A systems approach to economic evaluation of new health technology in helicopter emergency medical services
- 65101 Milazzo, Maria Francesca: Supporting decision-making in the chemical industry by a dynamic interpretation of the ALARP principle

- 64910 Langdalen, Henrik: Socio-economic profitability of security measures is more than expected benefits minus expected costs

#### **4.2 Critical Infrastructures and Critical Societal Functions II (Pre-defined symposium): Jonas Johansson**

Location: Valberget

- 64939 Arvidsson, Björn: Critical Infrastructures, GIScience and Risk Governance: A literature review of synergistic research opportunities
- 64944 Rydén Sonesson, Tove: Modelling and Simulation of Critical Infrastructures for Supporting Risk Governance: An exploratory literature review
- 65350 Grottenberg, Lars Ole: Towards an active flu management based on real-time spatiotemporal information from societal systems
- 65089 Rød, Bjarte: Critical Infrastructures - how resilient are they?

#### **4.3 Climate security and climate change risk: Chair Ullrika Sahlin**

Location: Atlantic Hall

- 65092 Kiste, Andreas: Risk perception and harmonized railway tunnel safety; The fear of (not) interfering
- 64951 Oramah, Chinwe, Philomina: The impact of climate security on climate change adaptation: An analysis of local risk governance in Nigeria.
- 6104 Keränen, Jaana: Tools and methods of climate risk assessment for regional decision makers
- 65348 Ogunbode, Charles: The resilience paradox: coping attenuates the link between flooding experiences and intentions to mitigate climate change