

53rd ESReDA Seminar: **Final Programme**

Enhancing Safety: the Challenge of Foresight 14th and 15th November 2017, EC Joint Research Center, Ispra – Italy

The Paper Submission and Review Process

The 53rd ESReDA Seminar has attracted a large number of potential contributors and high quality abstracts have been submitted for review; each abstract has been carefully reviewed by the Technical Program Committee (TPC) members. The review has been done according to the following main evaluation categories:

- Relevance of the topic for the Seminar scope;
- Scientific relevance.

As a result of the review process, the 26 most focused contributions have been retained for inclusion in the Seminar Final Program including four invited lecturers:

Fabiana Scapolo, EC Joint Research Center, Belgium,
Ana Afonso, European Food Safety Authority, Parma, Italy,
Antonio d'Agostino, European Union Agency for Railways, Valenciennes, France,
Lorenzo Fiamma, European Maritime Safety Agency, Lisbon, Portugal,

The Final Program is the result deriving from the review process of the full final papers by the TPC, after confirmation and scheduling of all the invited lectures in the allotted time slots. It is herewith annexed. Invited lectures have been allotted a 35' time slot each, including time for questions and discussions. Presentations have been reserved 25', including time for questions and discussions.

The Technical Program Committee:

*Ana Lisa Vetere Arellano (EC JRC Dir. E – Space, Security and Migration, Italy),
*Zdenko Simic (EC JRC Dir. G – Nuclear Safety and Security, The Netherlands),
Ludwig Benner (Investigation Process Research, USA), Bastien Brocard (EDF, France),
Nicolas Dechy (IRSN, France), Yves Dien (CHAOS, France), Antonio Felicio (ESReDA, Portugal), Milos Ferjencik (University of Pardubice, Czech Republic),
Paulo Maia (EDP, Portugal), Eric Marsden (FonCSI, France), Sever Paul (AGIFER, Romania), Sverre Roed-Larsen (SRL HSE, Norway), Fabiana Scapolo (JRC Dir. I - Foresight, Behavioural Insight & Design for Policy, Belgium), Dan Serbanescu (Romanian Academy, Romania), Miodrag Strucic (JRC Directorate G – Nuclear Safety and Security, The Netherlands), John Stoop (Kindunus, The Netherlands), Tuuli Tulonen (Tukes, Finland), Frank Verschueren (Ministry of Labor, Belgium).

*Technical Program Committee chairperson

Chairman of the seminar

L. Ferreira (ESReDA President, Professor at University of Porto, Portugal)

ESReDA 53rd Seminar Final Schedule

1st day, Tuesday November the 14th, 2017

- 7.40** Departure from Hotel, (*Final time will be notified a few days before the Seminar*)
- 8.00** Arrival of the buses at JRC, clearance of entrance permissions, security matters,
- 8.15** Arrival at the seminar room, JRC Auditorium, Registration, Welcome coffee
- 8.30-9.00** **Welcome to the participants, opening, logistics**
Luis Ferreira, ESReDA President
Naouma Kourti, Deputy Unit Head, Technology Innovation in Security
Maureen Wood, Sector Head, Major Accident Hazards Bureau, Technology Innovation in Security Unit
Ana Lisa Vetere Arellano & Zdenko Simic
- 9.00-10.00** **SESSION 1.**
Transferring foresight approaches to the safety domain Chairs:
Ana Lisa Vetere Arellano and Zdenko Simic
- 9.00-9.35** **Invited Lecture I: Foresight as tool to support policymaking and some reflection on how it can be applied to safety management**
Fabiana Scapolo, Deputy Unit Head, Foresight, Behavioural Insight & Design for Policy
- 9:35-10:00** **Uncertain future. Unsafe future?**
Sverre Røed-Larsen and John Stoop
- 10.00-10.30** **Coffee Break**
- 10.30-12:10** **SESSION 2.**
Foresight challenges in safety management
Chairs: Frank Verschueren and Eric Marsden
- 10:30-10:55** **How did aviation become so safe, and beyond?**
John Stoop
- 10:55-11:20** **On some issues related to the safety margin and the process of safety foresight for the nuclear power plants**
Dan Serbanescu
- 11:20-11:45** **The McNamara fallacy blocks foresight for safety**
John Kingston and Yves Dien
- 11:45-12:10** **Foresight for risk prevention and resilience: to what extent do they overlap?**
Nicolas Dechy, Myriam Merad, Laura Petersen, Maria Luisa Pestana, Igor Linkov and Yves Dien

12.10-13.10	Lunch and Coffee
13.10-14:00	SESSION 3. Foresight and technology Chairs: John Stoop and Bastien Brocard
13:10-13:35	Potentials, limitations and problems of technologies for enhancing safety and foresight <i>Zdenko Šimić</i>
13:35-14:00	Cogeneration: technologies, possibilities, challenges <i>Tomasz Jackowski, Karol Kowal and Sławomir Potemski</i>
14.00-14.20	Coffee Break
14:20-16.00	SESSION 4. From risk analysis as input to foresight Chairs: Tuuli Tulonen and Fabiana Scapolo
14:20-14:45	Invited Lecture II: Emerging risks in food and feed, the importance of foresight <i>Ana Afonso, EFSA, Italy</i>
14:45-15:10	Roles of incident scenarios in foresight <i>Milos Ferjencik</i>
15:10-15:35	Foresight in process industry through dynamic risk assessment: implications and open questions <i>Nicola Paltrinieri</i>
15:35-16:00	Horizon scanning approaches for early sensing of cyber-physical threats to water utilities <i>Eivind H. Okstad and Øyvind Dahl</i>
16.00-16.30	Coffee Break
16.30-17:45	SESSION 5. Tools and methodologies Chairs: Milos Ferjencik and Dan Serbanescu
16:30-16:55	Analysis and management of accident precursors in manufacturing industry <i>Micaela Demichela, Gabriele Baldissoni and Salvina Murè</i>
16:55-17:20	The role of mathematics in the enhancement of safety <i>Bernard Beauzamy</i>
17:20-17:45	Enhancement of safety imagination in socio-technical systems with gamification and computational creativity <i>Antonio De Nicola, Andrea Falegnami, Riccardo Patriarca, Giordano Vicoli and Maria Luisa Villani</i>
17.45-17.55	Close of Day 1, Dinner logistics
18:00	Bus to Hotels
19.45	ESReDA 53rd Seminar Dinner

2nd day, Wednesday November the 15th, 2017

- 7.45** **Departure from Hotel**
- 8.00** Arrival of the buses at JRC, clearance of entrance permissions, security checks of luggage etc.
- 8.30** Arrival at the meeting room, Welcome coffee
- 8.45-10.10** **SESSION 6.**
Foresight for safety management
Chairs: Sverre Roed Larsen and Frank Verschueren
- 8:45-9:20 **Invited Lecture III:**
Strategy and projects for a predictive safety regulation and safety management
Antonio d'Agostino, ERA, France
- 9:20-9:45 **Justifying safety interventions based on uncertain foresight: empirical evidence**
Eric Marsden
- 9:45-10:10 **Is whistleblowing a promising "tool" for event occurrence prevention?**
Yves Dien
- 10.10-10.40** **Coffee Break**
- 10.40-12:05** **SESSION 7.**
Early warning signs: Understanding threats through monitoring
Chairs: Yves Dien and Bastien Brocard
- 10:40-11:15 **Invited Lecture IV:**
From maritime multi-sensorial data acquisition systems to the prevention of marine accidents
Lorenzo Fiamma.
- 11:15-11:40 **Evolution of remote performance monitoring in ship's safety decision making reinforced by Analytic Hierarchy Process**
Ioannis Dagkinis, George Leventakis and Nikitas Nikitakos
- 11:40-12:05 **Increasing forced unavailability of power plants due to economical conditions**
Henk Wels and Thijs Slot
- 12:05-13.05** **Lunch and Coffee**

- 13.05-13.55 SESSION 8.**
Learning from experience to improve foresight in safety
Chairs: Nicolas Dechy and Miodrag Strucic
- 13:05-13:30 **The Learning Review: Adding to the accident investigation toolbox**
Ivan Pupulidy and Crista Vesel
- 13:30-13:55 **A model for analyzing near-miss events by adopting system safety principles**
Silvia Maria Ansaldi, Maria Grazia Gnoni and Paolo A. Bragatto.
- 13:55-14:15 Coffee Break**
- 14.15-15.30 SESSION 9.**
From database management to foresight
Chairs: Tuuli Tulonen and Sever Paul
- 14:15-14:40 **Use of event and causal Factor Short Chart reports to assess and simplify accident reports**
Miodrag Strucic
- 14:40-15:05 **HIAD - Hydrogen Incident and Accident Database**
Daniele Melideo, Eveline Weidner, Francesco Dolci and Pietro Moretto
- 15:05-15:30 **Cognitive inhibitors for threat assessment and automated risk management**
Jochen L. Leidner and Timothy Nugent
- 15:30-15:50 CLOSING SESSION**
Chairs: Ana Lisa Vetere Arellano and Zdenko Simic
- Closing speeches**
Ana Lisa Vetere Arellano and Zdenko Simic, JRC
Kaisa Simola, Sector Head Knowledge Management, Knowledge for Nuclear Safety, Security & Safeguards Unit
Luis Ferreira, ESReDA President
- 16.00 Bus to Airport and Hotels**

Schedule of other ESReDA Events to be held at JRC in Ispra

The ESReDA Board of Directors meetings will be held at JRC on:

- **November 13th, 2017, from 15.00 to 17.00** (final timing and room location will be defined a few days before Seminar).
- **November 14th, 2017, from 18.10 to 19.20**

PG Foresight in Safety Meeting to be held on the 13th and 16th at JRC.

Other PG meetings will be hosted at JRC on November 13th, 2017.

Timing and details will be communicated to the attendees.

LOGISTIC ISSUES

How to participate and register to the seminar?

- Registration will be accepted until October 15th 2017.
- Participants have to register **twice**: to ESReDA by filling a form and to JRC Ispra for security, access and logistics.

Use both [registration form](#) (send to jrc-esreda53rdseminar@ec.europa.eu) and online service at web.jrc.ec.europa.eu/rem/app.html?#/subscription-form-screen/meetingId=86053.

Seminar Fee

Fee to Non-ESReDA member participants is 300€ (waiver: free fee for the speaker of a paper and for 3 participants per ESReDA member) **to be paid by direct transfer to the following account:**

Bank: BNP Paribas Fortis Bank, Boulevard Jamar 1 D, 1060 Bruxelles, Belgium
IBAN: BE69 0012 3728 1678
BIC: GEBABEBB
Subject: Registration to the 53rd ESReDA Seminar

Hotels and transportation information package

An **information package** (hotels, transportation) will be sent to the participant that have registered through the **registration online** at JRC website. Hotels pre-registered rooms will be allocated to participants, and detailed information sent later.

For any further request, please contact: jrc-esreda53rdseminar@ec.europa.eu

Local Organization Committee:

- *Ana Lisa Vetere Arellano (EC JRC Dir. E – Space, Security and Migration, Italy)
- *Zdenko Simic (EC JRC Dir. G – Nuclear Safety and Security, The Netherlands)
- *Local Organizing Committee Chairs

For Logistics:

European Commission Joint Research Centre, Ispra/Petten

jrc-esreda53rdseminar@ec.europa.eu

Orsolya SUDAR, +39-0332-789783; Maria IOAKEIMIDOU, +31-224-565023

Location: European Commission Joint Research Centre, Ispra Site:

ec.europa.eu/jrc/en/about/jrc-site/ispra

European Commission Joint Research Centre (EC JRC)

As the European Commission's science and knowledge service, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle. Its work has a direct impact on the lives of citizens by contributing with its research outcomes to a healthy and safe environment, secure energy supplies, sustainable mobility and consumer health and safety.

Two directorates are supporting organization of this seminar:

JRC Directorate E – Space, Security and Migration

JRC Directorate G – Nuclear Safety and Security

<https://ec.europa.eu/jrc>

European Safety, Reliability & Data Association (ESReDA)

European Safety, Reliability & Data Association (ESReDA) is a European Association established in 1992 to promote research, application and training in Reliability, Availability, Maintainability and Safety (RAMS). The Association provides a forum for the exchange of information, data and current research in Safety and Reliability.

ESReDA membership is open to organisations, privates or governmental institutes, industry researchers and consultants, who are active in the field of Safety and Reliability. Membership fees are currently 1000 EURO for organisations and 500 EURO for universities and individual members. Special sponsoring or associate membership is also available.

For more information on ESReDA, contact: Inga.Zutautaitė@lei.lt

ESReDA General Secretary, Dr. Inga Žutautaitė

Senior Researcher at Lithuanian Energy Institute

ESReDA address: European Safety, Reliability & Data Association, an International Non-Profit Scientific Association under the Belgium law (June 27, 1921, Title III). Headquarter: ESReDA, rue Gachard 88 Bte 14, B-1050 Bruxelles, Belgium, Siret: E00005802.

Any interested party is welcome to contribute to ESReDA project groups. See <https://www.esreda.org/projectcasestudy/>

ESReDA Project Group on Foresight in Safety

In autumn 2015 a project group was launched for 2-3 years to address Foresight in Safety. It meets twice a year. It gathers industry experts, researchers and consultants from: EDF-R&D (France), EDP-Gestão da Produção de Energia, S.A. (Portugal), IRSN (France), EC JRC (Italy and The Netherlands), Kindunos (the Netherlands), Tukes (Finland), FonCSI (France), SRL HSE (Norway), University of Pardubice (Czech Republic), Labor Ministry of Belgium, and AGIFER (Romania).

ESReDA former Project Groups

ESReDA has supported several project groups that have produced deliverables and books. Available publications are listed on ESReDA website.

<https://www.esreda.org/esreda-publications/>

ESReDA former project groups deliverables on “*accident investigation*” (2001-2008) and “*dynamic learning as a follow-up from accident investigations*” (2009-2015) edited books and electronic reports available on ESReDA website.

<https://www.esreda.org/projectcasestudy/dynamic-learning-as-the-follow-up-from-accident-investigations/#more-322>