



## Forthcoming ESReDA SEMINARS

### The 54<sup>th</sup> ESReDA Seminar



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France



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### 54<sup>th</sup> ESReDA Seminar on Risk, Reliability and Safety of Energy Systems in Coastal and Marine Environments

25-26 April 2018, Nantes, France

The 54<sup>th</sup> ESReDA Seminar will take place in Nantes, France, 25-26 April 2018. The seminar is organized by ESReDA PG on [Reliability of Wind Turbines](#) and hosted by [Université de Nantes](#).

The programme proposes around 30 papers which cover five topics: "Risk at sea: key issues, perception and evaluation", "Marine renewable energy structure and systems reliability", "Reducing the risks and levelized cost of energy - increase safety", "Stochastic degradation processes of marine structures" and "Non-destructive testing, monitoring and diagnosis of marine renewable energy materials, structures and devices".

The technical programme includes keynote lectures:

- "Risk, Reliability and Safety of Energy Systems in Coastal and Marine Environments", *JD. Sorensen* (Aalborg University);
- "Presentation of MRE research in Pays de la Loire: West Atlantic Marine Energy Community", *P. Baclet* (CEO of WEAMEC, France);
- "Next H2020 calls in MRE", *F. Kermagoret* (University Bretagne Loire).



The draft programme is available at ESReDA website: [click to download](#).

Visit of Scientific Equipments for Marine Renewable Energy is planned on 27 April (9:00-12:00). If you are interested in, please contact professor Franck Schoefs (before 10 April 2018, 6 pm; [mail to contact](#)).

**Registration** is already **opened**: registration form and information for a seminar venue are available at [ESReDA website](#).

### The 55<sup>th</sup> ESReDA Seminar



Vali Patrascu,  
AGIFER, Romania

### 55<sup>th</sup> ESReDA Seminar on Accident Investigation and Learning to Improve Safety Management in Complex System: Remaining Challenges

9-10 October 2018, Bucharest, Romania

The 55<sup>th</sup> ESReDA Seminar will take place in Bucharest, Romania, 9-10 October 2018, hosted by the [Romanian Railway Investigating Agency \(AGIFER\)](#).

Accident investigation and learning from events are fundamental processes in safety management, involving technical, human, organizational and societal dimensions. These activities are concerned by a number of challenges that limit their effectiveness and by a number of opportunities for improvement:

- Safety investigations in complex systems face challenges in understanding and investigating inter-organizational issues (such as governance, shared responsibilities, limits to information flow, role of competition and other economic incentives), in coping with the increasing role of media pressure and presence of civil society in investigations, and the evolving role of regulatory authorities.
- There are major challenges in bringing into practice a body of existing knowledge on accident investigation and learning to generate system change for safety improvement. This requires better understanding of the obstacles to practical application of good practices. Given differences in histories, technologies and culture, these obstacles are sometimes sector-specific, or peculiar to certain countries, or more generic. New strategies need to be



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identified to overcome the obstacles to sharing of good practice and improvement of the quality of safety investigations.

- New opportunities for safety investigation and learning arise from technological progress, such as the increasing use of big data and text mining tools, and the related analytics.

These questions apply to several aspects where margins for improvement are still expected:

- paradigms, models and methods for accident/event investigation;
- data and evidence collection, forensic techniques;
- investigators' competencies, learning and safety management competencies for specialists and generalists;
- organisational readiness to investigate and to learn;
- dissemination of information, lessons and integration with knowledge management and safety culture,
- event databases, big data and related analytics;
- systemic approaches integrating technical, human and organizational factors;
- safety recommendations and engineering change;
- lessons learning processes (single case, stories, relationships with organisational learning),
- change management and integration with safety management and risk governance,
- interfaces with regulators and stakeholders from society.

The 55<sup>th</sup> ESReDA seminar will be a forum for exploring the questions mentioned above. The seminar goal is to discuss about the results in specific areas, and to share and explore the experiences of using other paradigms, approaches, methods, databases, implementation of safety systems across various industries. Authors are invited to present their works, proposals and discuss successes and failures in safety management.

Papers for the seminar are welcome from various stakeholders (industrialists, regulators, investigation and safety bodies, universities, R&D organizations, engineering contractors and consultants, training specialists) and could address different sectors: Railway sector and other transport sectors; Energy (including nuclear, conventional and renewable, production and distribution); Process industry: oil and gas, chemical and petrochemical facilities; Critical infrastructures; Natural hazards; Health, Environment; Security and terrorism threats.

**Deadline for abstract submission is April 20, 2018.** More information: visit the [ESReDA website](#).

## The 56<sup>th</sup> ESReDA Seminar



Dmitry Efrosinin  
JKU Linz, Austria



Mohamed Eid  
CEA, France

## The 56<sup>th</sup> ESReDA Seminar on Critical Services continuity, Resilience and Security 23-24 May 2019, Linz, Austria

Critical services continuity is a major societal security issue in modern society. They vital for the society and supplied thanks to a large variety of Critical Infrastructures (CIs). Some services disruptions may endanger the security of the citizen, the safety of the strategic assets and even the governance stability.

The CIs are more and more connected thanks to the information technology (IT) and supply services in every aspect in man's daily-life. The continuous progress in the IT fields pushes modern systems and infrastructures to be more and more: intelligent, distributed and proactive. That increases not only the operational complexity of the CI's but their vulnerability. The more complex a system is, the more vulnerable it will be and the more numerous the threats that can impact on it. The loss of operability of critical infrastructures may result in major disruption in some vital services supply leading to severe crises.

To counterbalance the increasing vulnerability of the systems, engineers, designers and operators should enhance the system preparedness and resilience facing different threats. That requires a supported continuous effort in many corresponding fields. One of them is "Modelling, Simulation & Analysis (SM&A)" of the CI in order to enhance the CIs' preparedness & resilience.

ESReDA as one of the most active EU networks in the field has initiated a project group (CI-PR/MS&A-Data) on the "Critical Infrastructure/Modelling, Simulation and Analysis – Data". The main focus of the project group is to report on the state of progress in MS&A of the CIs preparedness & resilience with a specific focus on the corresponding data availability and relevance.

In order to report on the most recent developments in the field of the CIs preparedness & resilience MS&A and the availability of the relevant data, ESReDA will hold its 56<sup>th</sup> Seminar on the following thematic: "Critical Services continuity, Resilience and Security".

The 56<sup>th</sup> ESReDA seminar will be held on 23-24 May 2019, hosted by Johannes Kepler University, Linz, Austria. The Call for Papers will be online at ESReDA website soon.

## Proposals for new ESReDA PROJECT GROUPS

Two proposals to launch new ESReDA Project Groups (PGs) have been submitted. ESReDA encourages Members to join the initiatives. Members are invited to contact PGs leaders directly, if they are interested in the topics.

**Proposed by  
University of  
Nottingham (UK)**

### **PG on Resilience Engineering and Modelling of Networked Infrastructure**

Many of the critical infrastructure systems on which modern society is so dependent are networks. These include transport networks (rail, metro, highway, air traffic and shipping routes), utilities (electricity, gas, water) and communications (mobile phone, land line phones, internet). The disruption of such systems can have a big impact on the communities that they serve. The nature of the threats to these systems is also changing and includes failures, especially of aging infrastructure, natural disasters, the effects of climate change and deliberate acts such as terrorism. Such critical systems need to be resilient. This project group will focus on the transport and utilities networks to keep the project manageable over three years. For these sectors it will look at the characteristics of each of the networks and the methods which exist to model their resilience and identify the weaknesses where the most effort should be expended to protect the performance of the network.

The following issues will be addressed by the Project Group:

- The concept of resilience is not yet well-defined in System-Engineering. Modern engineering systems are growing in size and complexity, they are also becoming more distributed, integrated and autonomous. A unified, consistent approach is required to enable their resilience to the full range of potential threats.
- The metrics predicted along with the methods to do so are inconsistent in the absence of a well-defined proven concept of resilience in system-engineering. A unified modelling framework will be considered.

A whole life, whole system approach will be considered by the project group.

There is a potential for follow on project groups to investigate networked systems in other sectors. A Technical Committee structure is proposed in order to provide this potential longer term legacy within ESReDA.

The Project Group would have four main objectives:

- Develop a forum by which the leading researchers from both academia and industry can meet, exchange ideas and where appropriate work together on projects relevant to the area of Resilience Engineering for Networked Systems.
- Produce a technical reference text which will document the current state-of-the-art along with the advances made over the duration of the project in the aspects of Resilience Engineering that have been the focus of the work.
- Disseminate the work conducted emphasizing its practical application at a future ESReDA seminar.

The PG ESReDA members become part of a newly formed Resilience Engineering Technical Committee led by the chair of the Project Group. This will in principal be a three-year project group whose remit is to:

1. Promote resilience engineering & modelling (REM) within ESReDA and outside.
2. Run future seminars on REM
3. Assess the potential for other future REM theme-related Project Groups.
4. Organise Special sessions at International Conferences.
5. Circulate relevant events and news items to ESReDA members and PGs.
6. Build-up and maintain a virtual e-library on the most relevant documents on REM and put it for free access and downloading
7. To provide a link with other similar Committees/groups to initiate and maintain collaborative work, such as ESRA-TC on Resilience, RESILIENT Europe, ResilienceLab and ENISA.

Joint Project group Leaders:

- Dr Rasa Remenyte-Prescott, University of Nottingham,
- Professor John Andrews, University of Nottingham.

Project group Secretary – Kathryn Sanderson, University of Nottingham ([mail to contact](#)).

## **PG on Creating Safe and Resilient Supply Chain**

The objective of the new ESReDA Project Group (PG) is to provide a comprehensive state of the art on creating and performance of safe and resilient supply chains. The research will be of a theoretical and practical nature. Based on the literature studies, there will be investigated, summarized and developed definitional concepts, process patterns, guidelines for building business relationships, quantitative and qualitative analysis methods, model measurement systems, and modelling and simulation techniques. On the basis of research among the existing supply chains, there will be collected data on current process, analytical and measurement solutions, current best practices, ranges of data collected for monitoring supply chains, and specific threats in the sector.

Goals of the Project Group "Creating safe and resilient supply chain" are:

- to better define the supply chain term in the context of resilience theory and safety theory,
- to provide the literature review in the resilience and safety areas (regarding to supply chain performance) in order to e.g. sort out these terms,
- to review the measurement systems in order to provide the classification of the known measures, methods, models, and indexes used for supply chain resilience and safety performance assessment,
- to develop case studies for supply chains performing in chosen sectors of the economy, with the particular emphasis on a process analysis and used measurement systems with the data collected for their needs,
- development of simulation models based on business solutions, aimed at studying the ongoing relationships in modelled systems and optimizing logistic processes,
- development of the scope of data collected for the purpose of monitoring resilience and safety in performing supply chains and guidelines for reporting systems of supply chains' participants,
- to propose the new method for supply chain creating and their monitoring in the context of the measurement systems that are focused on safety and resilience of performed logistic processes.

The working group from Wrocław University of Science and Technology (the Project Leader) will provide the comprehensive literature review in supply chain resilience theory as well as develop the assumptions for the concept of creating and monitoring of supply chains. The leader will also coordinate the remaining work carried out by the group. The project coordinator from the Wrocław University of Technology will be Agnieszka Tubis, PhD.

The other PG participants are expected to provide the research works in the area of real supply chains performance in order to examine the operation of logistic processes and used resilience measurement systems. At present, the following Polish universities have signed up for participation in the work of the PG: Wrocław University of Economics from Wrocław, AGH University of Science and Technology from Krakow, Silesian University of Technology from Gliwice, Air Force Institute of Technology from Warsaw, and Military University of Land Forces from Wrocław.

Project Group Leaders:

- Professor Tomasz Nowakowski, Wrocław University of Science and Technology
- Dr Agnieszka Tubis, Wrocław University of Science and Technology ([mail to contact](#))

## **Forthcoming Conferences & Seminars**



Inga Žutautaitė  
Lithuanian Energy Institute,  
Lithuania



### **The 13<sup>th</sup> International Conference on Critical Information Infrastructures Security (CRITIS 2018)**

24-26 September, 2018, Kaunas, Lithuania

In 2018, the International Conference on Critical Information Infrastructures Security faces its 13<sup>th</sup> anniversary. CRITIS 2018 continues the tradition of presenting innovative research and exploring new challenges in the fields of critical (information) infrastructures protection (C(I)IP), resilience, and of fostering the dialogue with all stakeholders. CRITIS 2018 topics and the call for papers at [CRITIS 2018 website](#).

CRITIS 2018 aims at bringing together researchers, professionals from academia, critical (information) infrastructure operators, industry, defence sector, and governmental organisations working in the field of the security of critical (information) infrastructures.

As in previous years, invited speakers will complement a programme of original research contribution. CRITIS 2018 is very proud to announce the first confirmed keynote: Dr. Stefan Lüders (Head of Computer Security at CERN, Switzerland) "[Bridging the gap between ICS and corporate IT security: Finding common culture and views](#)" (25 September, 2018).





Ričardas Krikštolaitis  
Vytautas Magnus  
University, Lithuania

Besides, this CRITIS conference has a special focus on current and future **energy infrastructures** within a **special session** "[Energy infrastructure operators and stakeholders: key challenges and solution directions](#)", chaired by Marcelo Masera (EC JRC in Petten, the Netherlands). Invited speakers are expected to be from (the list is not complete): Litgrid (electricity TSO, Lithuania), PSE S.A. (electricity TSO, Poland), Svenska kraftnät (electricity TSO, Sweden), Gassco (gas TSO, Norway), Enel (electricity and gas DSO, Italy), BKW Group (Switzerland), Latvenergo (Latvia), EC DG HOME (Belgium), NATO ENSEC (Lithuania).

Project leaders who intend to disseminate their activities are encouraged to participate in a special [Projects Dissemination Session](#). Similarly, a session will be devoted to Industry working in the field of the security of critical (information) infrastructures. CRITIS 2018 encourages Industry to share their innovative key achievements in a special [Industry session](#).

**Deadline for full-text submission is April 30, 2018.** Visit [CRITIS 2018 website](#).

## Other Conferences and Seminars

**CYSENI 2018 – the 15<sup>th</sup> Annual International Conference of Young Scientists on Energy Issues**  
23-25 May 2018, Kaunas, Lithuania. Call for papers at the [CYSENI website](#).

**SSARS 2018 – the 12th Summer Safety & Reliability Seminars**  
24-30 June 2018, Gdańsk/Sopot, Poland. Call for papers at [SSARS 2018 website](#).

**ESREL 2018 – the 28<sup>th</sup> Annual European Safety and Reliability Conference**  
17-21 June 2018, Trondheim, Norway. Call for papers at the [ESREL 2018 website](#).

**The  $\lambda\mu$  21<sup>st</sup> Risk Management, System Dependability & Safety Symposium**  
16-18 October 2018, Reims, France. Call for papers at the [IMdR website](#).

## Other News



EC JRC, Italy

### Search for a candidate to apply for a MC grant

EC Joint Research Centre (JRC) is looking to host a dynamic and motivated candidate after successful application for the Marie Skłodowska-Curie grant. The potential candidate should be fluent in English, holding recent PhD diploma in the field of applied mathematics, physics or engineering with strong background in system modelling and programming. The project is to develop a gas transmission network simulator to simulate gas disruptions, network resilience and security of supply scenarios. The in-house developed simulator ProGasNet operates on graphical flow algorithms and the successful candidate is expected to contribute by implementing a hydraulic simulation toolbox.

Scientific contact point: Vytis Kopustinskas ([mail to contact](#)).

Hosting institution: European Commission, JRC, Directorate for Energy, Transport and Climate, Ispra (VA), Italy.

Formal grant eligibility criteria can be found at <http://ec.europa.eu/research/mariecurieactions>. The expected application deadline is mid-September, 2018.

### ESReDA: European Safety, Reliability & Data Association

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