



## Previous ESReDA SEMINARS

### The 52<sup>nd</sup> ESReDA Seminar

#### The 52<sup>nd</sup> ESReDA Seminar on Critical Infrastructures: Enhancing Preparedness & Resilience for the security of citizens and services supply continuity

30-31 May 2017, Kaunas, Lithuania

The **Final Proceedings** of the 52<sup>nd</sup> ESReDA Seminar is already available for public consultation and free downloading in compliance with ESReDA politics of free dissemination of scientific and technical knowledge ([click to download](#)). A brief report about the seminar at [ESReDA website](#).

### The 53<sup>rd</sup> ESReDA Seminar

#### The 53<sup>rd</sup> ESReDA Seminar on Enhancing Safety: the Challenge of Foresight

14-15 November 2017, Ispra, Italy

On the 14-15 November 2017, ESReDA in collaboration with the European Commission Joint Research Centre organized the 53<sup>rd</sup> ESReDA Seminar entitled Enhancing Safety: the Challenge of Foresight in Ispra, Italy.



Ana Vetere  
EC DG JRC Directorate E:  
Space, Security and  
Migration, Ispra, Italy



Zdenko Simic  
EC DG JRC Directorate G:  
Nuclear Safety & Security,  
Petten, The Netherlands



Nicolas Dechy  
IRSN, France



The 53<sup>rd</sup> ESReDA seminar launched an open dialogue with stakeholders in the safety arena to present their experiences from different sectors in foresight approaches, with a view to see, e.g. how foresight could be mainstreamed into safety practice in a more consistent manner, amongst others. The seminar offered a technical programme with four keynote speeches from:

- *Fabiana Scapolo*, European Commission Joint Research Centre, 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

There were also 23 other presentations made by stakeholders from universities, research centres, industry, government service and safety authorities. Their topics addressed were foresight related from various perspectives: safety, risk assessment, scenarios, resilience, horizon scanning, early warning signals, database management, whistle-blowers, knowledge management, big data, data visualisation, etc., and from various industries: nuclear, chemical, electricity, food, maritime, railroad and aviation. These presentations were grouped in nine sessions as follows: Transferring foresight approaches to the safety domain; Foresight challenges in safety management; Foresight and technology; From risk analysis as input to foresight; Tools and methodologies; Foresight for safety management; Early warning signs: Understanding threats through monitoring; Learning from experience to improve foresight in safety; From database management to foresight.

There were 57 participants from 15 countries (Belgium, Czech Republic, Finland, France, Greece, Italy, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Switzerland, United Kingdom and United States). The [final programme](#) of the 53<sup>rd</sup> ESReDA Seminar is available. Some photos have been taken during the seminar, which can be seen in the [Gallery](#) section of ESReDA website.

Presentations of the 53<sup>rd</sup> ESReDA Seminar Speakers will soon be available for download.

The final proceedings of the 53<sup>rd</sup> ESReDA Seminar will also soon be available for download, in compliance with ESReDA politics of free dissemination of scientific and technical knowledge.

## Forthcoming ESReDA SEMINARS

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

#### 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, hosted by [Université de Nantes](#).

The 54<sup>th</sup> ESReDA Seminar has attracted a large number of potential contributors and more than 30 high quality abstracts on the wide range of subjects and energy systems have been submitted. The preliminary programme and the list of invited speakers will be announced at ESReDA website soon.

**Registration** is already opened; registration form is available at ESReDA website: [click to download](#). Other practical details on the 54<sup>th</sup> ESReDA Seminar are at the [ESReDA website](#).

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

#### 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 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.



Vali Patrascu,  
AGIFER, Romania



Mircea Nicolescu,  
AGIFER, Romania



Sever Paul,  
AGIFER, Romania

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](#).

## Forthcoming Conferences & Seminars



Eric Luijff  
Programme Chair,  
TNO (retired) and Luijff  
Consultancy, the  
Netherlands



### 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 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 contributions. The conference invites the different research communities and disciplines involved in C(I)IP, and encourages discussions and multi-disciplinary approaches to relevant C(I)IP problems.

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](#)" in which invited key experts from the energy sector will share their experience in the field led by the fruitful discussions.

[CRITIS 2018 covers three thematic foci](#). Papers submission is encouraged but not limited to the following topics' categories (see [Call for Papers at the CRITIS 2018 website](#)): category 1: Technologies: Innovative responses for the protection of cyber-physical systems; category 2: Advances in C(I)IP organisation: Policies, good practices and lessons learned; category 3: Advances in Human Factors, decision support, and cross-sector C(I)IP approaches – focus on end-users. **Deadline for full-text submission is April 30, 2018.**

The conference pre-proceedings will appear at the time of the conference. All accepted papers will be included in full length in the pre-proceedings. As in previous years, it is planned that **post-proceedings** are published by **Springer-Verlag** in their **Lecture Notes in Computer Science (LNCS)** series. Accepted full papers will be included in full length in the post-proceedings.

Moreover, CRITIS aims to encourage and inspire early stage and open-minded researchers in this demanding multi-disciplinary field of research. Outstanding research performance demonstrated by young researchers may compete for the [Young CRITIS Award \(YCA\)](#). Research papers submitted to compete for the Young CRITIS Award shall cover one or more of the subjects mentioned above.

More information: visit the [CRITIS 2018 website](#).



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## Other Conferences and Seminars

### International Conference on INFRASTRUCTURE RESILIENCE

14-16 February 2018, Zurich, Switzerland. More information at the [conference website](#).

### Conference "Maintenance in Power Plants 2018" with Technical Exhibition

28 February - 1 March 2018, Bonn, Germany. [Call for Papers](#).

**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](#).

**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



André Lannoy  
ESReDA Honorary Member,  
IMdR, France

**IMdR offers projects in the field of data uncertainties** (André Lannoy, 19 December 2017)

For many years, IMdR has been carrying out projects where human and financial efforts are shared. These projects are also an opportunity for exchanges between companies from different industrial sectors, concerned about the same problems of risk management, safety and dependability. A program for the next few years has been recently initiated. One of the development points is the analysis and processing of uncertain data.

Following the HUMS project (IMdR, 2017), we can think that the experience feedback will become a new source of progress. We will go from a period of too little data to a period of too much data. This will upset all downstream uses of the collection of feedback data and in particular the reliability analysis. The "Big data in reliability" project sheet proposes to evaluate the impact on feedback, in particular on the analysis of the quality of the data (their accuracy and relevance), but also the impact on the data methods. Inevitably the failures should decrease, the data will be essentially degradation data that will have to be analysed. Downstream, safety based models, system models will also be impacted. Initially, the project sheet is limited to estimating reliability. It will be important to consider the impact of big data on the process of analysing degradations and failures and the impact on the skills to be implemented.

Textual feedback is increasingly used for failure analysis and analysis of incident-accident situations. All data is precious and the texts generally associated with the structured feedback data are rich in lessons. We cannot neglect this essential information anymore. The project sheet "Statistical methods of processing and interpreting feedback in natural language" (Méthodes statistiques de traitement et d'interprétation d'un retour d'expérience en langage naturel) written on the basis of the work (Blatter, Raynal, 2016; Tanguy, 2017; Tissot, 2017) proposes to study the statistical methods, such as latent semantic methods (LSA: Latent Semantic Analysis; LSI: Latent Semantic Indexation), topic modelling, word embeddings, for processing and interpreting feedback. In particular the contribution to the experience feedback experts and to the operators will have to be evaluated.

Many software packages treating uncertainty are now available, free of access or commercial. But what are they worth? The sheet "Comparison of Uncertainty Processing Software" (Comparaison de logiciels de traitement des incertitudes) proposes a comparison of these software packages, on the one hand with their descriptions, on the other hand with a comparison of the results obtained by the processing of two industrial applications by these software packages (including one analytical example). This comparison can be useful to give an assessment of the quality and the user-friendliness, but especially to highlight the possible weak points and the prospects in R&D.

Texts of these project sheets can be found on the IMdR website ([www.imdr.eu](http://www.imdr.eu)).

### References:

Blatter Christian, Raynal Céline (2016), Méthodes d'analyse textuelle pour l'interprétation des rex humain, organisationnel et technique, Congrès  $\lambda\mu$  19, Saint-Malo, 21-23 octobre 2014.

IMdR (2017), Projet IMdR, HUMS, Health and Usage Monitoring Systems, avril 2017.

Tanguy Ludovic (2017), Quel TAL pour le retour d'expérience? Réflexions sur les besoins et les solutions actuelles, Journée IMdR (16 mai 2017), Des méthodes aux applications du TAL dans le retour d'expérience.

Tissot Claire (2017), Text mining sur des données d'accidentologie, Journée IMdR (16 mai 2017), Des méthodes aux applications du TAL dans le retour d'expérience.

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

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