

55th ESReDA Seminar:
Accident investigation and learning to improve safety management
in complex systems: remaining challenges
9-10 October 2018, AGIFER, Bucharest - Romania



1st CALL FOR PAPER

Scope of the Seminar

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.

The 55th 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.

Application domains

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.

Seminar organisation

Location

Ramada Plaza Bucharest
Str. Poligrafiei nr.3-5, Sectorul 1
Bucureşti, Romania 013704

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Organization

The Seminar is jointly organised by ESReDA and AGIFER.

Technical Programme Committee (TPC)

Bastien Brocard (EDF, FRANCE)
Nicolas Dechy (IRSN, FRANCE)
Yves Dien (CHAOS, FRANCE)
Antonio Felicio (ESReDA, PORTUGAL)
Milos Ferjencik (University of Pardubice, CZECH REPUBLIC)
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Dan Serbanescu (Romanian Academy, ROMANIA)
Zdenko Simic (JRC, The NETHERLANDS)
John Stoop (Kindunos, The NETHERLANDS)
Miodrag Strucic (JRC Directorate G – Nuclear Safety and Security, The NETHERLANDS)
Tuuli Tulonen (Tukes, FINLAND)
Frank Verschueren (Ministry of Labor, BELGIUM)
Ana Lisa Vetere Arellano (JRC Directorate E – Space, Security and Migration, ITALY)

Local Organization Committee:

Vali Patrascu (head of service – AGIFER)
Mircea Nicolescu (head of service – AGIFER)
Sever Paul (investigator – AGIFER)

Relevant dates, abstracts and papers submission, preliminary schedule:

- Submission of abstracts: by 20th of April, 2018
- Notification to the authors: by June 1st, 2018
- Submission of final camera-ready papers: 20th of August 2018
- 8th of October 2018:
 - o Other ESReDA joint activities: Board of Directors meeting, project groups' meetings.
 - o A training workshop on good practices in accident investigation and learning.
- SEMINAR: 9th – 10th October 2018

Procedure to submit an abstract, paper and to register

Abstracts, not exceeding 400 words, should address:

- Objectives
- Relevance for the Seminar
- Novelty
- Methods and findings.

The language of the seminar is English. All presentations and debates will be translated simultaneously into / from Romanian language.

If the abstract is accepted, authors are expected to prepare a full paper for publication in the seminar proceedings. After the seminar, the final proceedings will be published online on ESReDA's website (free download).

Registration and Seminar Fee

Registration will be accepted until the **10th of September 2018**. A registration form and information package for the venue will be made available on the ESReDA website.

The fees for registration are **300 €**.

The fees for registration are **150€** for representative of Romanian research institutes, academia or governmental bodies.

Fees are to be paid by bank transfer to ESReDA:

Holder: ESReDA

Bank: BNP Paribas Fortis Bank, Boulevard Jamar 1 D, 1060 Bruxelles, Belgium

IBAN: BE69 0012 3728 1678

BIC: GEBABEBB

Subject: Registration to the 55th ESReDA Seminar

Fee waiver:

- One speaker per accepted paper may participate without paying seminar fees.
- Seminar fees for ESReDA members (maximum of three participants per organization) are waived.

About ESReDA

ESReDA is an international non-profit association with approximately 35 member organizations comprising companies from different industries, research organizations and universities working within the safety and reliability field.

ESReDA aims to promote the development and the exchange of data, information and knowledge through the promotion of Project Groups (PG) on subjects related to Reliability, Safety and Data Analysis. In these project groups, European specialists in these subjects are able to meet and, in a first time, to aggregate their knowledge and then to disseminate it for the sake of the scientific and technological communities. This dissemination can be made by organizing seminars twice per year and publishing the most important results of the Project Groups. Safety and Reliability Engineering is viewed as being an important component in the design of a system. However the discipline and its tools and methods are still evolving and expertise and knowledge dispersed throughout Europe. There is a need to pool the resources and knowledge within Europe and ESReDA provides the means to achieve this.

Any interested party is welcome to contribute to ESReDA Project Groups.

Membership fees are currently 1000 € for organizations and 500 € for universities, research institutes and individual members. Special sponsoring or associate membership is also available.

For more information on ESReDA, contact:

ESReDA General Secretary: Inga Žutautaitė (inga.zutautaite@lei.lt)

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.

<http://www.esreda.org>

About AGIFER

The **Romanian Railway Investigating Agency (AGIFER)** is a public institution, financed completely from its own funds and set up in 2015.

AGIFER is a technical specialized body for the railway and metro field, subordinated to the Romanian Minister of Transports, that meets with all the tasks of the body in charge with the investigation of accidents and incidents set up in 2007, according to the Law no.55/2006, that transposed into Romanian legislation the EU Directive no.49/2004 for the railway safety.

AGIFER has the following main tasks:

- a) investigation of major railway accidents;
- b) investigation of the incidents that arise during railway operations, coordinated by an investigator in charge, appointed from AGIFER;
- c) investigation of those accidents and incidents that, in slightly different conditions could lead to serious accidents, including the technical failures of the structural sub-systems or of the interoperability constituents, parts of European high speed and conventional railway system;
- d) other tasks specific to its activity field, entrusted through normative papers.

AGIFER can participate in projects in connection with the investigation or with the improvement of railway safety, financed through European funds, according to the legislation in force.

AGIFER employs 42 people, including 28 investigators or investigator in charge within the investigation commission, specialized for different railway areas: lines, equipment, wagons, locomotives, traffic. AGIFER also employs 2 psychologists in charge of the investigation of the human factors.

From its establishment in 2006 until today, AGIFER has performed 344 investigations of railway accidents and incidents.

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Former ESReDA Project Groups on Accident Investigation and Dynamic learning

The ESReDA project group “Accident Investigation” was operational from 2000 to 2008 to address accident investigation methods, practices, organizational conditions, institutional and regulations context.

The PG organized 2 seminars and issued three deliverables:

- the 24th ESReDA Seminar on “*Safety Investigation of Accidents*” in JRC, Petten, 2003
- the 33rd ESReDA Seminar on “*Future challenges of accident investigation*”; in JRC, Ispra, 2007
- “*Accident Investigation Practices - Results from a European Study*” (2003 – report edited by DNV);
- “*Shaping Public Safety Investigations of Accidents in Europe*” (2005 - ESReDA Safety Series – book edited by DNV);
- “*Guidelines for safety investigation of accidents*” (2008) available for free download on the ESReDA website.
- https://esreda.org/wp-content/uploads/2016/07/ESReDA_GLSIA_Final_June_2009_For_Download.pdf

The ESReDA project Group “Dynamic Learning as a follow-up from accident investigation” was in operation from 2009 to 2015. It worked on how lessons from events and accidents are learned.

The PG organized 2 seminars and issued four deliverables:

- The 36th ESReDA Seminar on “Lessons learned from accident investigations”, EDP, Coimbra, Portugal, 2009.
- The 45th ESReDA Seminar on “Dynamic Learning from Incidents and Accidents, Bridging the Gap between Safety Recommendations and Learning”, EDP, Porto – Portugal, 2013
- “Case study analysis on dynamic learning from accidents” ESReDA report,
- “Barriers to learning from incidents and accidents” ESReDA report,
- “Guidelines for preparing a training toolkit on event investigation and dynamic learning”, ESReDA report
- “Challenges to the investigation of occurrences. Concepts and confusion, metaphors, models and methods”. Essay by Pr. Stoop.

The 4 deliverables are available for free on the ESReDA website:

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

ESReDA Project Group on Foresight in Safety

In autumn 2015 a project group was launched for 3 years to address Foresight in Safety. The project group 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). It organised the 53rd Seminar in JRC at Ispra, Italy in November 2017.