



55th ESReDA Seminar: Program

Accident Investigation and Learning

to Improve Safety Management in Complex System:

Remaining Challenges

9th and 10th October 2018, Bucharest, Romania

The Paper Submission and Review Process

The 55th 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. As a result of the review process, we will now have the opportunity to listen to 22 presentations concentrating on the seminar topic. In addition, two invited lecturers are foreseen at the Seminar:

- Dan Serbanescu, Romanian Academy, ROMANIA
- Teodor Gradinariu, Senior Technical Advisor, International Union of Railways, Paris, FRANCE

The draft program of the seminar is presented here. Please note that the program may still be subject to change. Invited lectures have been allotted a 30' time slot each, including time for questions and discussions. Presentations have been reserved 25' including time for questions and discussions.

Chairman of the seminar

Luis FERREIRA, ESReDA President, Professor at University of Porto, PORTUGAL

The Technical Program Committee Chair:

Sever PAUL, Investigator - AGIFER, ROMANIA

The Technical Program Committee Members:

Ana Lisa VETERE ARELLANO (EC JRC, ITALY), Zdenko SIMIC (EC JRC, THE NETHERLANDS), 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), Sverre ROED-LARSEN (SRL HSE, NORWAY), Dan SERBANESCU (Romanian Academy, ROMANIA), Miodrag STRUCIC (EC JRC, THE NETHERLANDS), John STOOP (Kindunos, THE NETHERLANDS), Tuuli TOLONEN (Tukes, FINLAND), Frank VERSCHUEREN (Ministry of Labor, BELGIUM), Bastien BROCARD (EDF, FRANCE).

The Local Organizing Committee:

Sever PAUL (Investigator-AGIFER, ROMANIA), Vali PATRASCU (Head of Department – AGIFER, ROMANIA), Mircea NICOLESCU (Head of Department – AGIFER, ROMANIA)

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ESReDA | European Safety, Reliability &
Data Association



Location

Ramada Plaza Bucharest, **meeting room TERRA**
Str. Poligrafiei nr.3-5, Sectorul 1
București, Romania 013704

<http://www.ramadaplazabucharest.ro/>

Further information about the seminar: <http://www.esreda.org>



ESReDA 55th Seminar Schedule

1st day, Tuesday 9th October, 2018

8.00 – 8.30 Coffee + registration

8.30 – 9.20 WELCOME, OPENING

Luis Ferreira, ESReDA President

Representative of Romanian Transport Ministry

Raed ARAFAT, Secretary of State, Romanian Internal Affairs Ministry

Vasile BELIBOU, AGIFER General Manager

9.20 - 9.30 LOGISTICS, WORKSHOP

Ana Lisa Vetere Arellano, Tuuli Tulonen, Eric Marsden and Sever Paul

9.30 – 10.50 SESSION 1 – Past, present, future

Chairs: Tuuli Tulonen and Sever Paul

9.30 – 10.00 Invited Lecture I:

Similitudes and interconnections in accidents investigation and learning processes in various lifecycle phases and socio political environments for systems using different technologies

Dan Serbanescu

10.00 – 10.25 Railway Accident Investigation in a Globalising System

John Stoop, Wim Beukenkamp

10.25 – 10.50 From Sectorial to Multimodal Accident Investigation Boards – Some Lessons from the Development in the Nordic Countries

Sverre Røed-Larsen, John Stoop

10.50 – 11.10 COFFEE BREAK

11.10 – 12.25 SESSION 2 – Organizations and human aspects

Chairs: Yves Dien and Ana Lisa Vetere Arellano

11.10 – 11.35 Learning from organizational dysfunctionalities

Frank Verschueren

11.35 – 12.00 Effective communication during and after an aviation accident

Simona Wist

12.00 – 12.25 Issues with lessons learned, seen by field experts and managers, and synergy between experience reporting and experience sharing

Florence-Marie Jégoux



12.25 – 13.25 LUNCH

13.25 – 15.05 SESSION 3 – Methodological aspects

Chairs: Eric Marsden and Bastien Brocard

13.25 – 13.50 Method and Mindset: Two basic elements for accident investigation

Yves Dien

13.50 – 14.15 Events groups' importance ranking with consistent preferences consideration

Zdenko Simic

14.15 – 14.40 Reasonable recommendations

Tuuli Tulonen, John Stoop, Ana Lisa Vetere Arellano, Sever Paul, Milos Ferjencik, Matti Peippo, Erkki Teräsmaa

14.40 – 14.50 Arrangement for the workshop

14.50 – 15.10 COFFEE BREAK

15.10 – 16.50 SESSION 4 – Lessons learned and historical perspectives

Chairs: Sverre Roed-Larsen and John Stoop

15.10 – 15.35 Learning from incidents – the interactive way

Zsuzsanna Gyenes

15.35 – 16.00 Using the knowledge of accidents in organizational diagnosis of safety management:
a case study

*Nicolas Dechy, Jean-Marie Rousseau, Alexandre Largier, Stéphanie Tillement, Jan Hayes,
Benôit Journée*

16.00 – 16.25 Operating experience program at CNE Cernavoda

Alexandra Tudor

16.25 – 16.50 Are structural weaknesses limiting the capacity to learn from incidents?

Anthony Garforth, John Kingston, Petra Scheffers

16.50 – 17.00 Arrangement for the workshop

17.00 – 17.20 BREAK

17.20 – 18.20 WORKSHOP: *Debate about the Remaining Challenges of Accident Investigation and Potential Innovative Breakthroughs*

18.45 - Departure from Hotel Ramada to the restaurant by bus (1 hour)

20.00 - ESReDA 55th Seminar Dinner

Restaurant "Hanul lui Manuc", Str. Franceza nr.62, Bucuresti

<https://www.hanulluimanuc.ro/en/>



2nd day, Wednesday 10th October, 2018

8.40 – 9.00 Coffee

9.00 – 9.45 Reflection session: Discussion: ideas from the first day

9.45 – 10.15 Invited lecture II:

Cyber security in railways, threats and challenges. Results of UIC project ARGUS

Teodor Gradinariu

10.15 – 10.35 COFFEE BREAK

10.35 – 11.50 SESSION 5 – Methods

Chairs: Paulo Maia and Zdenko Simic

10.35 – 11.00 Do not repeat old mistakes in learning from accidents: It's better to prevent a run away than be ready for it

Milos Ferjencik, Oldrich Cizek

11.00 – 11.25 Analysing the depth of railway accident investigation reports on over-speeding incidents, using the SAFety FRactal ANalysis method

Bart Accou

11.25 – 11.50 On some issues related to the railways event impact on other industries

Dan Serbanescu

12.00 – 13.00 LUNCH

13.00 – 14.15 SESSION 6 – Case studies

Chairs: Frank Verschueren and Miodrag Strucic

13.00 – 13.25 Historical contradictions at work accidents by trampling in railway sector: analysis based on the Cultural Historical Activity Theory

Manoela Gomes Reis Lopes, Rodolfo Andrade de Gouveia Vilela, Ildeberto Muniz de Almeida, Silvana Zuccolotto

13.25 – 13.50 A historical and organizational point of view on Bretigny railway accident

Bastien Brocard

13.50 – 14.15 A freight train derailment analysis using Accident Investigation Board Norway method and Safety Management System wheel tool

Mircea Nicolescu

14.15 – 14.35 COFFEE BREAK



14.35 – 16.15 SESSION 7 – Going across sectors

Chairs: Nicolas Dechy and Milos Ferjencik

14.35 – 15.00 Independence and interdependence in safety investigations

Constantin Voicu

15.00 – 15.25 Some Aspects of the Probabilistic Versus Risk Evaluations of Railway Events

Alexandru Stoian, Dan Serbanescu

15.25 – 15.50 Key Factors of the National Emergency Management System

Petre Min

15.50 – 16.15 Dose Level Evaluation in a Nuclear Power Plant Accident

Dominic Eugeniu Moraru, Ilie Constantin Prisecaru, Daniel Dupleac

16.15 – 16.30 Closing session - "Seminar takeaways"

Chairs: Sever Paul and TPC members

16.30 – 16.40 CLOSING SPEECHES

Luis FERREIRA, ESReDA President

Vasile Belibou, AGIFER General Manager

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 Transport, 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.

www.agifer.ro

About the European Safety, Reliability & Data Association (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. For more information on ESReDA, please visit www.esreda.org.

About ESReDA Project Groups connected with this seminar

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.
- Guidelines for Safety Investigation of Accidents at ESReDA website.

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 Prof. Stoop.

The 4 deliverables are available for free at the [Project Group webpage](#) on the ESReDA website.

The ESReDA Project Group on Foresight in Safety was launched in autumn 2015. 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 and supported the organization of this seminar.