

65th ESReDA Seminar

From risk imagination to safety intervention - Managing risks with knowledge

November 14th - 15th, 2024

NCSR Demokritos, Athens (Greece)



Announcement and 2nd CALL FOR PAPERS

Scope

ESReDA's 'Risk, Knowledge, Management' (RKM) project group (PG) addresses the intricate relationships between risk, knowledge and management, aiming to find new ideas for preventing accidents and improving safety management with better utilisation of knowledge. The RKM PG organises the 65th ESReDA seminar to foster an exchange of ideas and expert debate. The National Centre of Scientific Research Demokritos in Athens will provide the forum.

The 65th ESReDA Seminar follows the successful 58th ESReDA Seminar on 'Using Knowledge to Manage Risks and Threats: Practices and Challenges' organised by JRC Institute of Energy (Petten, the Netherlands) and held virtually in June 2021.

Although we are told that we live and work in 'information and knowledge' society. Preventing accidents and enhancing resilience, by using the relevant safety knowledge and expertise, is not granted and requires continuous efforts to overcome the hurdles in an 'age of uncertainty'.

The main objective of this forthcoming seminar is to identify the enablers and barriers to the production of knowledge concerning safety risks and resilience and its effectiveness in decision-making and other management and operational activities. The key problematic question we will ask is: 'What does a management team, a regulator or a front-line operator need to know and can use to manage risks effectively?'



The purpose of the seminar is to reflect upon the following topics:

- Organisational characteristics that promote the ability to invest in identifying new threats, in imagining risks in a context of uncertainty.
- Tools and frameworks that facilitate evidence-based decision-making and effective safety interventions.
- Individual and collective capabilities and non-technical skills relevant to the sharing of information (including inconvenient truths) between the sharp end of operations and the blunt end where systems are designed; plans, schedules and standards are established; tradeoffs are made, and resources are allocated.
- Anticipating and managing the information and knowledge that will be needed at different stages of the system life-cycle; evidencing the added value of building synergy between safety and knowledge management;
- Recognising and rewarding the diverse types of expertise needed to identify early warning signs, interpret observations, analyse data, communicate information, and preserve knowledge.
- Specific challenges to ensure that valid information, relevant knowledge, 'proofs' but also 'doubts' are available to regulators, the justice system, the media, and the public.
- Technological innovation for risk knowledge management to improve safety and resilience analysis.
- Democratisation of knowledge through participatory approaches and accessibility of information to non-specialists
- Combination and usage of distributed knowledge in complex risk scenarios for crisis management.
- The importance and the role of technology to analyse and to manage adequately risk knowledge as well as to communicate it effectively.
- The role of culture in risk management and the importance of risk communication.

The 65th ESReDA seminar will be a forum for exploring the above mentioned and other related questions. We aim to discuss theories, concepts, and experiences of enhancing the use of knowledge for better risk analysis, management and governance. Authors are invited to present their research and operational proposals and raise challenges, but also to discuss successes and failures in enhancing risk management through better use of risk knowledge. We want to encourage new ideas, scientific papers, conceptual papers, case studies and cross-sectoral and inter-disciplinary research on the theme of challenges and practices for using knowledge in risk and resilience analysis, management, and governance. This seminar will bring together researchers, practitioners, specialists and decision-makers to discuss strategies and practical experiences.

Papers for contributions to the seminar are invited; please see instructions in the next paragraphs.



Target groups and domains of application

Papers for the seminar are invited from various stakeholders, including practitioners and researchers (industrialists, regulators, safety boards, universities, R&D organisations, engineering contractors and consultants, training specialists) and could address different sectors:

- Energy sector: nuclear and non-nuclear (e.g. fossil, renewables) power plants and networks.
- Process and hazardous industry: oil and gas, chemical and petrochemical facilities, industry 4.0.
- Manufacturing.
- Hydrogen Technology.
- Energy transition.
- Transport (rail, road, air and maritime): supply and distribution network, operations, emerging technologies such as driverless cars and autonomous vessels.
- Aerospace industry.
- Critical infrastructure: electricity, water, telecommunications, information systems.
- Public sector and government.
- Urban planning and management.

This seminar is aimed at addressing issues, risks (industrial, natural, Na-Tech, etc.), threats (malicious, cyber-security, terrorism, etc.) and resilience faced by different industries, critical infrastructures, and urban settlements. Other topics may be included if they fit well within the theme of the seminar and are related to using knowledge to manage risks and threats, such as product safety, food safety, biotechnology, health crises, etc.

ESReDA Project Group on Risks, Knowledge and Management

In 2020, ESReDA launched a project group to address the relationships between risks, knowledge and management. The scope defined is of interest to system designers, operators, managers, maintenance, lawyers, insurers, regulators, and many others working on safety and security including natural hazard management. The scope covers the safety, reliability and security related to multiple hazards and threats (natural, high-risk industry, critical infrastructure, communication and transport systems over different territories etc.) involving all stakeholders (public, operators, regulators and government). Risk management integrates all activities and disciplines related to assessment, identification of early warning signs and emerging risks, foresight, investigation of events and lessons to be learned, management of barriers and lines of defence, reliability, and change of policies and culture. In this context, the keyword *knowledge* defines the main topic of the project: the endeavour to use knowledge to improve the management and governance of risks (from design to operation and dismantling/decommissioning).

Seminar organisation & venue:

Organisation;

The Seminar is jointly organised by ESReDA and NCSR DEMOKRITOS.

Location;

National Centre of Scientific Research DEMOKRITOS, Athens, Greece.
Patriarchou Grigoriou and Neapoleos str. 15310, Agia Paraskevi.



Technical Program Committee

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- Vytis Kopustinskas (EC JRC, ITALY)
- Zdenko Šimić (PSI, SWITZERLAND)
- Bogdan Vamanu (National Institute of Physics & Nuclear Engineering, ROMANIA)
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- Saulius Gudžius (Kaunas University of Technology, LITHUANIA)
- Antonio Guillen (ESREDA)
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Local Organising Committee (LOC)

- Myrto Konstantinidou (NCSR Demokritos, GREECE)
- Effie Markoulaki (NCSR Demokritos, GREECE)
- Klio Makrigiannaki (NCSR Demokritos, GREECE)
- Eleni Bairachtari (NCSR Demokritos, GREECE)

Relevant dates, abstracts and papers submission, preliminary schedule:

- Submission of abstracts: ~~before 20 May 2024~~ **30 June 2024.**
- Notification to authors: **20 July 2024**
- Submission of camera-ready papers: **30th September 2024**
- **13th of November 2024:** ESReDA joint activities such as Board of Directors meeting and project groups' meetings.
- Date of the seminar: 14th and 15th November 2024



Procedure to submit an abstract, paper and to register

The abstracts, not exceeding 400 words, should address:

- Objectives of the paper
- Relevance to the Seminar
- Novelty or relevant contribution to the subject
- Methods and findings
- Main conclusions

The language of the seminar is English.

Final papers (4 to 12 A4 pages) should be submitted after the notification to the authors. Extended abstracts (2-5 pages A4 pages including references) are an alternative to full papers. Both extended abstracts and full papers will be published by ESReDA in the online proceedings.

Authors wishing to present a paper are invited to submit an abstract online at <https://easychair.org/conferences/?conf=65thesredaseminar>.

and send their submission in copy to esreda65seminar@ipta.demokritos.gr

Guidance for authors and speakers about the format to be used for ESReDA camera-ready papers will be sent directly to authors who expressed interest to write a contribution.

More information will be announced soon at ESReDA webpage: <http://www.esreda.org/>

Seminars Proceedings

The final proceedings of the 65th Seminar will be edited in the form of Technical Report and e-published with public access.

Registration and Seminar Fee

Registration will be accepted **until 14 October 2024**. A registration form and information package for the venue will be made available on the ESReDA website (<http://www.esreda.org/>).

The fees for registration are €300. Fees are to be paid by bank transfer only to ESReDA account:

Holder: ESReDA

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

IBAN: BE69 0012 3728 1678

BIC: GEBABEBB

Subject: 65th ESReDA Seminar – Registration fees

Fee waiver:

- Fees will be waived for one speaker per accepted paper.
- The participation fee for ESReDA members are taken in charge by the Seminar (in the limit of 3 participants per ESReDA member).

If there is any question, participants should use e-mail: esreda65seminar@ipta.demokritos.gr with Antonio Guillén (ajguillen@us.es) and Mohamed Eid (eid.etudes@gmail.com) in Cc.



About DEMOKRITOS

Founded in July 1961 as a Research Centre for Nuclear Research, Demokritos is today the largest multidisciplinary Research Centre of Greece. It has approximately 180 Researchers in tenured and tenure-track positions, and over 500 Research Personnel working in projects funded mainly by grants from State Funds, the European Union and Private Industries. The Centre consists of five independent Institutes focusing on different scientific fields. The Institute of Nuclear & Radiological Sciences and Technology, Energy & Safety (INRASTES) is an interdisciplinary R&D establishment pursuing basic, translational and applied research to address challenges of great scientific and socioeconomic impact in a broad spectrum of scientific and technological fields.

The System Reliability and Industrial Safety Laboratory (SRISL) is part of the Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety Radiation Protection of NCSR 'Demokritos'. The laboratory has been conducting top research on the safety and reliability of industrial systems for almost 35 years providing industry with relevant tools for the analysis of occupational and industrial accidents, the identification of hazards in industrial installations and the quantitative assessment of risks. SRISL, in collaboration with other European research organisations, focuses its research efforts on problems addressing the support of decisions concerning the management of risk, the land use planning around dangerous sites, the evaluation of the role of the organisational and management systems of a company on the safety of the installations, the assessment and management of emerging risks, and the collection, and analysis of accident data towards increased prediction and prevention of future accidents.

