



## **TRACK RESILIENCE ENGINEERING AND MANAGEMENT: FROM PREVENTION TO RECOVERY**

**14<sup>th</sup> International Conference on  
INFORMATION SYSTEMS FOR CRISIS RESPONSE AND MANAGEMENT**

***“AGILITY IS COMING”***

**Workshops and Doctoral Symposium May 21<sup>th</sup>, 2017  
Conference May 22<sup>nd</sup>-24<sup>th</sup>, 2017**

**ALBI (FRANCE)**  
Ecole des Mines d’Albi-Carmaux



## INTRODUCTION TO THE TRACK

The functionality of modern society depends on critical infrastructures (CIs) performing critical functions (CFs). Energy, information and communication systems, public transport, or financial services are several examples of independent but interconnected networks in our daily life. They are built and managed to provide a set of crucial services to society, economies, and authorities – and maintain their structure and services in the midst of various challenges and conditions.

Reviewing potential risks that arise from system challenges serve as a complicated task due to the inherent uncertainty regarding the likelihood and consequences of such risks in various points in the future alongside the inherent complexity of the infrastructural system at hand. A significant limiting factor here includes a primary focus upon known threats with historical or experimental drivers by which we may quantitatively measure infrastructure risk probabilities. However, increasing system complexity and opportunities for substantial loss of services indicate that instead of more traditional risk management options, stakeholders must inherently review the resilience of CFs and CIs in the presence of external shocks and stresses.

Even though multiple definition of resilience exist, we adopt definition by the US National Academy of Science defining resilience as “the ability to anticipate, prepare for, respond to, adapt to disruptions and to mitigate the consequences as well as to recover in timely and efficient manner including preservation restoration of services”. The proposals of resilience engineering and management to measure and evaluate resilience, as well as to analyse and consider the whole system and processes is of great interest for both CI and CF designers and stakeholders.

**This open track aims to gather and to explore international state-of-the-art research results, emerging trends, and case studies which promote CF and CI engineering and management approaches to resilience.**

We invite industrial and academic authors to submit high quality contributions describing significant, original, and unpublished results.

## TRACK TOPICS

**Topics of interest** include, but are not limited to:

- **Resilience:** conceptual approaches, pragmatic experiences
- **Risk vs. Resilience:** Similarities and Differences
- **Resilience and other Related Concepts:** robustness, survivability, interoperability, security, safety, performance
- **Resilience Engineering:** motivation, challenges, theories vs. pragmatic, methods, models and tools, Model-Based Resilience Engineering and Assessment, REX (Returns of Experience)
- **Resilience Assessment:** methods, metrics, criteria, approaches, tools
- **Resilience Management:** technical, informational and organisational measures and barriers for all steps of the resilience life-cycle
- **Resilience as System Property:** interdependencies across physical, social and information domains.
- **Smart Resilience:** internet of things, user experience design, simulations
- **Applications:** healthcare, power grid, information and communication networks, water and gas production and distribution, multimodal transportation networks combining land, sea and air transportation, large open and distributed manufacturing systems

## AUTHORS AND REVIEWERS RECRUITEMENT

Academic and Industrial researchers and applicant involved in Risks and Resilience Engineering and Management communities e.g. partners from EU and US-funded projects on resilience, on academic networks and expertise will be involved both in proposing articles or in reviewing papers.

## TRACK CHAIR AND CO-CHAIR

The three co-chairmen propose this track for the first time in the context of ISCRAM congress.



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