



## **Thematic Session on Environmental effect on structural integrity**

### **1. Thematic session title**

Thematic Session on Environmental effect on structural integrity

### **2. Organizers, including affiliations**

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### **4. Short description of the symposium including the scope and target public**

The thematic session Environmental effect on structural integrity is organised within the First International Symposium on Risk Analysis and Safety of Complex Structures and Components (IRAS2019), which will take place in the Faculty of Engineering of the University of Porto, Portugal, from 1-2 July 2019 (<http://fe.up.pt/iras2019>).

This thematic session is intended to be a forum of discussion of the results in theoretical, experimental, and computational investigations focused on safety, reliability, maintenance,

lifetime assessment of different technical systems and their elements operating under severe environmental conditions for aircraft and energy application.

This topic covers various aspects of failure analysis of engineering materials on different levels (macro- and micro-) under complex mechanical loading in aggressive environments. These include, but not limited to, the following:

- Combined mechanical and chemical effect on structural integrity. Lifetime issues
- New materials. Design and technology solutions
- Failure mechanisms and reliability assessment
- Advance in materials characterization and modeling
- Protection solutions, including coating development
- Modern opportunities for diagnostic systems and the prospects of their development

All contributions in the form of extended abstracts will be peer reviewed by the members of H-IRAS2019-EESI Scientific Committee. Full papers will be published in special issues of the scientific journals available for IRAS2019 event upon peer review and acceptance.

Please submit your work by email to **efedorova@sfu-kras.ru** or **iras2019@fe.up.pt** with subject **H-IRAS2019-EESI**.