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European Safety and Reliability Conference

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CALL FOR ABSTRACTS

Special session on

Electromagnetic Risk Management

Description

Electromagnetic (EM) Risk Management deals with topics that ensure, and assure, safety and reliability of electronic systems under diverse electromagnetic conditions. Most of the work in the field concentrates on managing electromagnetic interference (EMI) risks. EM risk management within the functional safety domain is called EM Resilience, which is covered by standards such as IEC 61000-1-2, and most recently by IEEE 1848. Other emerging topics in EM risk management are handling EM risks of large complex systems and autonomous systems.

Motivation

With the increasing use of electronics in safety critical systems in many different industry areas including aerospace, automotive, marine, and medical industries, the challenge of managing the electromagnetic risks needs to be addressed. Traditionally, EM risks have been mitigated inside the electromagnetic compatibility domain, but since 2004 it has become clear that this is not enough. To assure system (functional) safety of systems, new interdisciplinary methodologies managing EM risks in their operation need to be employed. In addition, efficient and cost-effective means to address EM risks in system development need to be identified, to ensure the best compromise between the initial investment and subsequent monetary risks of capability being unavailable.

Objective

This special session invites authors to submit works related to the following electromagnetic risk management topics:

- Electromagnetic resilience of safety critical systems
- Use of existing safety and reliability engineering methods in EM risk management
- New methods for EM risk management
- Managing electromagnetic interference and/or compatibility risks in complex systems

Authors are invited to submit works on both general methodology development as well as specific case studies.

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