



European Safety and Reliability Conference

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**CALL FOR ABSTRACTS**

**Special session on**  
***Probabilistic tools for an optimal  
maintenance of railway systems***

**Description**

Reliability analysis and maintenance optimisation has become an integral part of system design and operation. This is especially true for systems performing critical tasks, such as in the railway field.

**Motivation**

If the optimization of maintenance is a particularly challenging issue in most of industrial fields, this is particularly true in the railway industry since it deals with integrated systems, where all parts can interact. Indeed, a degradation on the track can impact the catenary integrity through changes on the rolling stock dynamic. To address this challenging issue that is optimizing the maintenance of such systems, many studies were done using probabilistic tools... from the use of simple lifetime distributions or of specific stochastic processes to the development of decision support tools based on probabilistic graphical models. But, the railway field is in perpetual evolution, with new availability and operating constraints but also with a new need for economical effectiveness. This is the reason why new research are always needed to optimize maintenance strategies for rail systems.

**Objective**

The main objective of this session is to provide a forum for participants, both academics and industrials, to discuss new research for the optimisation of railway maintenance.

**Organizer**

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The validation of the special sessions will be done under the responsibility of the technical and scientific committee. Organizers are invited to provide a list of reviewers that may be supplemented by TC members to ensure consistency in the evaluation process.