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European Safety and Reliability Conference

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*Panel on*  
*Model-Based Safety Assessment approach:*  
*Increase trust in models*

**Description**

*Model-Based Safety Assessment (MBSA) exists since many years now and the advantages of this approach are well known. However, modelers are sometimes confronted with the same old questions: Is the model really valid? Are the results correct? Those questions often take their origins in a lack of knowledge of the MBSA approach but reveal an important issue: how to prove the validity of models and results?*

*The following topics will be addressed:*

- 1. Modeling process*
- 2. Training & Communication*
- 3. Model representativeness*
- 4. Model-Checking*
- 5. Tools & Software*
- 6. Documentation & Capitalization*

## Motivation

*The aim of this panel session is to give leads to modelers to prove the validity of their models. An example of modeling process will be proposed. Based on this process, few solutions will be presented:*

- *Plan MBSA to define inputs needed, objectives and development specification*
- *Model-Based System Engineering (MBSE) / MBSA coupling initiatives (S2C, S2ML...) and others methods to ensure the model representativeness to the corresponding system*
- *Model-checking for the verification of the consistency of the model*
- *Validation activities (step-by-step simulation...)*
- *Provide documentation with model for explanation*
- *MBSA supporting activities (training & communication) and resources (database, existing patterns...)*
- *Possibilities offered by MBSA tools & languages to assist modelers*

## Organizer

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The validation of the panel 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.