RSSRail2023
Reliability, Safety and Security of Railway Systems

UPDATE

Technische Universität Berlin

We are very happy to announce that the fifth RSSRail will be happening on October 10-12, 2023 in Berlin.

The railway industry faces increasing pressure to improve system safety, to decrease production costs and time to market, to reduce carbon emissions and running costs, and to increase the capacity of the railway. Railway systems are now being integrated into larger multi-transport networks. Such systems require an even higher degree of automation at all levels of operation. These trends dramatically increase the complexity of railway applications and pose new challenges in developing novel methods of modelling, analysis, verification and validation to ensure their reliability, safety and security, as well as in supporting novel mechanisms and procedures to help make the case that development processes meet the mandated standards.

This conference will bring together researchers and developers working on railway system reliability, security and safety to discuss how all of these requirements can be met in an integrated way. It is also vital to ensure that advances in research (in both academia and industry) are driven by the real industrial needs. This will help ensure that such advances are followed by effective industrial deployment. Another particularly important objective is to integrate advances in research into the current development processes, and make them usable and scalable. Finally, a key goal is to develop advanced methods and tools that can ensure that the systems meet the requirements imposed by the regulatory standards and help in building the supportive arguments. This will be a working conference in which research challenges and progress will be discussed and evaluated by both researchers and engineers, focusing on their potential to be deployed in industrial settings.

- Topics of particular interest include:
- Safety in development processes and safety management
- Combined approaches to safety and security
- System and software safety analysis
- Formal modelling and verification techniques
- System reliability
- Validation according to the standards
- Safety and security argumentation
- Fault and intrusion modelling and analysis
- Evaluation of system capacity, energy consumption, cost and their interpla
- Tool and model integration, tool chain
- Domain-specific languages and modelling frameworks
- Model reuse for reliability, safety and security
- Modelling for maintenance strategy engineering

NEW!

- **Post Quantum Cryptography in the context of safety critical systems**
- **Migration strategies for railway systems to PQC**
- **Formal security analysis of safety critical systems**

The conference offers different options for presenting research:

- Regular conference papers of 16 pages
- Industrial conference papers of 10 pages, providing real-life feedback
- Student conference papers of 10 pages, showcasing novel ideas and early research results
- Poster presentation, not to be accompanied by a full paper, however the abstract will be published on the website
- tutorials to be offered in the first day (in total 4 tutorials a 90 minutes in two parallel sessions)

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The important dates

- May 12, ~~May 5,~~ 2023: full paper submission
- June 20, ~~May 16,~~ 2023: Notification
- July 14, 2023 camera-ready papers submitted
- July 14, 2023 abstract submission for posters

The conference proceedings will be published by Springer in the LNCS series. The conference submission will be via https://www.tu.berlin/bbi/rssr2023 Submissions must be formatted in the Springer LNCS format [details see www.springer.com/computer/lncs?SGWID=0-164-6-793341-0].

Conference Chairs

RSSRail 2022 is organized and supervised by :

- Simon Collart-Dutilleul (Université Gustave Eiffel)
- Thierry Lecomte (CLEARSY)
- Birgit Milius, TU Berlin, Germany

Program Committee (to be confirmed)

- Abderrahim Ait Wakrime, University Mohammed V, FSR, Morocco
- Alessandro Fantechi, University of Florence, Italy
- Alexander Romanovski, Newcastle University, UK
- Alexei Iliasov, The Formal Route, UK
- Aryldo Russo, CERTIFER, France
- Barbara Gallina, Mälardalen University, Sweden
- Bas Luttik, Eindhoven University of Technology, Netherlands
- Carlo Becheri, Alstom, Italy
- Christophe Ponsard, Cetic , Belgium
- David Bonvoisin, RATP, France
- Elena Troubitsyna, univ Stokholm, Swenden
- Etienne Prun, ClearSy, France
- Fabien Belmonte, Alstom, France
- Peter Popov, City University, UK
- Sana Debbech, IRT Railenium, France
- Stefano Tonetta, FBK-irst, Italy
- Fares Chucri, SNCF, France
- Francesco Flammini, Linnaeus Univ., Sweden
- Frank Golatowski, Univ. of Rostock, Germany
- Hironobu Kuruma, Hitachi, Japan
- Jan Peleska, Verified Systems Int., Germany
- Jens Braband, Siemens, Germany
- Anne Haxthausen (Technical University of Denmark)
- Kenji Taguchi, CAV Technologies, Japan
- Klaus Reichl, Thales, Austria
- Laurent Voisin, Systerel, France
- Mariëlle Stoelinga, Univ. of Twente, Netherlands
- Mario Gleirscher, University of Bremen, Germany
- Maurice ter Beek, ISTI, CNR, Pisa, Italy
- Michael Leuschel, Univ. of Düsseldorf, Germany
- Nadia Chouchani, IRT Railenium, France