



International Conference
Reliability, Safety and Security of Railway Systems:
Modelling, Analysis, Verification and Certification

November 14-16, 2017

Pistoia, Italy

Call for Papers

The railway industry is facing increasing pressure to improve system safety, to reduce production cost and time to market, to lower carbon emissions and running costs, and to increase system capacity. Railway systems are now being integrated into larger multi-mode 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 for modelling, analysis, verification and validation to ensure their reliability, safety and security, as well as in supporting new mechanisms and procedures to help argue that development processes are meeting the required standards.

Following the success of RSSRail 2016 held in Paris on June 28-30, 2016, this conference will contribute to a range of key objectives. There is a pressing demand to bring together researchers and developers working on railway system reliability, security and safety to discuss how these requirements can be met in an integrated way. It is also vital to ensure that all 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 industrial deployment. Another particularly important objective is to integrate advances in research into current development processes, and make them usable and scalable. Finally, a key goal is developing advanced methods and tools that would ensure that the systems meet the requirements imposed by the standards and help in building the arguments.

Development of the complex railway systems of the future requires integrated environments and methods that support different abstraction levels and multiple views, encompassing systems architecture, safety analysis, security analysis, verification methods and tools.

The RSSRail 2017 conference aims to bring together researchers and engineers interested in building critical railway applications and systems. This will be a working conference in which research advances will be discussed and evaluated by both researchers and engineers, focusing on their potential to be deployed in industrial settings.

<http://conferences.ncl.ac.uk/rssrail/>

Topics of particular interest for RSSRail 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 interplay
- Tool and model integration, tool chains
- Domain-specific languages and modelling frameworks
- Model reuse for reliability, safety and security
- Modelling for maintenance strategy engineering.

Submissions are encouraged in three categories:

- Research papers; Industrial experience reports; PhD student papers.

Research papers must be no more than 16 pages in length; industrial experience reports and PhD student papers no more than 10 pages. All submissions must be formatted in the Springer LNCS format (see www.springer.com/computer/lncs?SGWID=0-164-6-793341-0).

The conference submission site is <https://easychair.org/conferences/?conf=rssrail2017>

The conference proceedings will be published by Springer in the LNCS series.

Important dates:

- June 1, 2017 – abstract submission
- June 8, 2017 – paper submission deadline
- July 8, 2017 – notification of acceptance
- August 18, 2017 – camera-ready papers submitted

Conference Chairs:

Alessandro Fantechi, University of Firenze, Italy

Thierry Lecomte, ClearSy, France

Alexander Romanovsky, Newcastle University, UK

PC members:

Carlo Becheri, ALSTOM, Italy

Mark Behrens, Independent consultant, Germany

Andrea Bondavalli, University of Firenze, Italy

David Bonvoisin, RATP, France

Fares Chuciri, SNCF, France

Simon Collart-Dutilleul, IFFSTAR, France

Francesco Flammini, UMUC Europe, Germany

Stefania Gnesi, ISTI, Italy

Frank Golasowski, University of Rostock, Germany

Anne Haxthausen, TU of Denmark, Denmark

Baseliyos Jacob, Deutsche Bahn, Germany

Michael Jastram, Formal Mind, Germany

Alexei Iliasov, Newcastle University, UK

Tim Kelly, University of York, UK

Hironobu Kuruma, Hitachi, Japan

Michael Leuschel, Dusseldorf University, Germany

Gianluca Mando, Thales, Italy

Jean Marc Mota, Thales R&T, France

Jan Peleska, Verified Systems Int., Germany

Ralf Pinger, Siemens AG, Germany

Christophe Ponsard, CETIC, Belgium

Peter Popov, City University, UK

Etienne Prun, ClearSy, France

Matteo Rossi, Politecnico di Milano, Italy

Aryldo Russo, CERTIFER, France

Balazs Saghi, BUTE, Hungary

Kenji Taguchi, AIST, Japan

Jaco van de Pol, University of Twente, Netherlands

Laurent Voisin, Systerel, France

Kirsten Winter, University of Queensland, Australia

Local Organisation Chair:

Veronica Bocci, DITECFER, Italy

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More information: <https://conferences.ncl.ac.uk/rssrail/>