

International Association of Railway Operations Research (IAROR)

Call for Papers

The 9th International Conference on Railway Operations Modelling and Analysis (RailBeijing 2021)

Beijing, China,

November 3rd-7th, 2021

1. Aims of IAROR

IAROR was founded in 2005 and has currently more than 400 members. IAROR combines the expertise of academic and professional railway research with the aim of enhancing the quality of service for railway passengers and customers, improving the effectiveness and efficiency of capacity management, timetabling, traffic management and ensuring the safety of railway operations. IAROR stimulates innovative theoretical approaches, high-tech concepts, new technological developments and dynamic decision support systems that contribute to a higher flexibility, performance and punctuality of trains operating on single or dedicated lines and in heterogeneous networks. IAROR contributes to the development of new international standards for railway capacity and traffic management by integration of the state-of-the-art from different scientific disciplines as engineering, mathematics, physics, economics and computer science. IAROR aims at becoming the Network of Excellence in the field of railway operations research and an acknowledged advisor to governments, railway infrastructure managers, train operating companies and the industrial suppliers with regard to the development and evaluation of research programs, innovation strategies, directives and norms for railway operations.

IAROR organizes the International Conference on Railway Operations Modelling and Analysis (ICROMA) every two years since 2005. The previous eight conferences were held in Delft University of Technology, the Netherlands; Leibniz University Hannover, Germany; ETH Zürich, Switzerland; University of Rome, Italy; Technical University of Denmark, Denmark; Chiba Institute of Technology, Japan; IFSTTAR, France; Linköping University, Sweden. The 9th international conference RailBeijing2021 will be held in Beijing Jiaotong University, China.



2. Scientific topics

RailBeijing 2021 solicits contributions dealing with any aspect of railway operations modelling and analysis.

Typical, but not exclusive, topics of interest are:

- Land use, mobility and line planning.
- Transport economic modelling for railways.
- Capacity and robustness in saturated networks.
- Impact of signaling and safety systems on capacity and punctuality.
- Impact of train priorities, dispatching rules and dedicated lines on network capacity.
- Optimal network timetabling and maintenance scheduling.
- Crew and vehicle scheduling.
- Timetable stability, punctuality, temporal and spatial distributions of timetable margins.
- Scheduling and routing of passenger and freight trains.
- Real-time rescheduling, disturbance and disruption management.
- Prediction of route conflicts, arrival and departure times.
- Passenger flows in stations, on platform, and dwell time distribution.
- Multimodal transportation.
- Energy saving in railways.
- Impact of emerging technology on future railway operation.
- Governance, benchmark analysis and performance evaluation.
- Connections between railway and other transport modes.

3. Paper Submission and Important Dates

Prospective participants need first to specify the type of a submission:

Type A: research paper.

Type B: professional paper.

The authors of research papers (Type A) should submit a full paper of a maximum length of 20 pages in ICROMA format including figures and references, while the authors of professional papers (Type B) should submit a full professional paper of around 10 pages at the maximum. The full research papers will be reviewed according to the standard scientific criteria: originality, consistency, relevance and technical writing proficiency. The review of the full professional papers will retain the former criteria except scientific originality.

All the manuscripts should be original and have not been previously submitted for consideration of publication in any journal/conference. Authors are requested to download the paper template at the website: <http://www.railbeijing2021.com>, and submit the full manuscript electronically in the standard format to the Easy Chair system (<https://easychair.org/conferences/?conf=railbeijing2021>).

Submission system open: December 1st, 2020

Deadline of paper submission: January 1st, 2021

Notification of acceptance: July 1st, 2021

End of early registration: July 31th, 2021

End of registration: September 30th, 2021

Conference: November 3rd-7th, 2021

4. Publication

The best papers selected by the Scientific Advisory Committee members will be announced and published in a special issue of the Journal of Rail Transport Planning & Management.

5. Keynotes and Short Course

Leading railway scientists from different disciplines and directors from the railway industry will deliver keynote speeches. A short course on Railway operations will be offered optionally to young researchers on November 7th, 2021. More details will be announced in due time.

6. Young Railway Operations Research Award

The Young Railway Operations Research Award will be awarded to outstanding young researchers who present their excellent papers in the conference. The winners will be announced at the conference dinner or at the conference closing ceremony.

To apply for the award, the nominee must:

- 1) be 35 years old or younger,
- 2) be the main author of the paper,
- 3) be registered to the conference,
- 4) be the presenter of the paper.

Winners are nominated and designated by the IAROR Board.

7. Organizer

Organizer: IAROR

Co-organizer: School of Traffic and Transportation, Beijing Jiaotong University



8. Organization Committee

Norio Tomii, Nihon University (President of IAROR)
Ingo A. Hansen, Delft University of Technology (Vice-President of IAROR)
Jiaqiong Wang, Beijing Jiaotong University (Conference Chair)
Huawu He (Conference Honorary Chair)
Chunfang Lu (Conference Honorary Co-Chair)
Lei Nie, Beijing Jiaotong University (Conference Vice Chair)
Tongjun Wang (Conference Co-Vice Chair)
Fang Sun (Conference Co-Vice Chair)
Enjian Yao, Beijing Jiaotong University (Conference Program Chair)
Lingyun Meng, Beijing Jiaotong University (Conference Organization Chair)
Shiwei He, Beijing Jiaotong University (Conference Program Co-chair)
Yun Bai, Beijing Jiaotong University (Conference Organization Co-chair)

9. Scientific Advisory Committee

Norio Tomii, Nihon University
Ingo A. Hansen, Delft University of Technology
Lei Nie, Beijing Jiaotong University
Lingyun Meng, Beijing Jiaotong University
Shiwei He, Beijing Jiaotong University
Abhyuday, Indian Institute of Technology Kharagpur India
Alex Wardrop, TTG Transportation Technology
Alex Landex, Ramboll Group
Andrea D'Ariano, University of Rome Tre
Andreas Oetting, Technische Universität Darmstadt
Anders Peterson, Linköping University
Carlo Mannino, SINTEF ICT Oslo
Christian Liebchen, Technische Fachhochschule Wildau
Dario Pacciarelli, Università degli Studi Roma Tre
Francesco Corman, ETH Zürich
Giorgio Medeossi, University of Trieste
Ivan Belošević, Faculty of Transport and Traffic Engineering
Joaquin Rodriguez, Université Gustave Eiffel

Joern Pachl, Technical University of Braunschweig
John Preston, University of Southampton
Luis Cadarso Morga, Universidad Rey Juan Carlos
Markus Bohlin, KTH Royal Institute of Technology and RISE
Maged M. Dessouky, University of Southern California
Nils Nießen, RWTH Aachen University
Nikola Besinovic, Delft University of Technology
Otto Anker Nielsen, Technical University of Denmark
Paola Pellegrini, Université Gustave Eiffel
Pieter Vansteenwegen, KU Leuven Mobility Research Center
Rob Goverde, Delft University of Technology
Ronghui Liu, University of Leeds
Steven Harrod, Technical University of Denmark
Stefano Ricci, University of Rome
Thomas Schlechte, LBW Optimization GmbH
Thomas White, Transit Safety Management
Tyler Dick, University of Illinois at Urbana-Champaign
Xuesong Zhou, Arizona State University
Yung-Cheng (Rex) Lai, Taiwan University

10. Contact Information

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For more information, please visit the conference website at: <http://www.railbeijing2021.com>