

IAROR

International Association of Railway Operations Research

Call for Papers

6th International Conference on Railway Operations Modelling and Analysis *Planning, Simulation and Optimisation Approaches*

Chiba Institute of Technology, Japan
March 23 – 26, 2015

AIMS OF IAROR

IAROR was founded in 2005 and has currently more than 250 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.

AIM AND SCIENTIFIC ISSUES

The 6th International Conference on Railway Operations Modelling and Analysis will contribute to interdisciplinary diffusion in the railway operations research area through the discussion of analytical, combinatorial and simulation approaches and project results by engineers, mathematicians, economists and computer scientists. The following research & development topics focussing on high quality railway timetabling, efficient and reliable operation of infrastructure and trains will be discussed during the conference, among others:

- Land use, mobility and line planning
- Capacity and robustness in saturated networks
- Optimal network timetabling and maintenance schedules
- Passenger flows in stations, on platform, and dwell time distribution
- Impact of signalling and safety systems on capacity and punctuality
- Validation of stochastic analytical and simulation models
- Timetable stability, punctuality, temporal and spatial distributions of timetable margins
- Impact of train priorities, dispatching rules and dedicated lines on network capacity
- Scheduling and routing of passenger and freight trains
- Real-time rescheduling, disturbance and disruption management
- Energy-efficient driving and driver advisory systems
- Prediction of route conflicts, arrival and departure times
- Impact of climate change on future railway operation
- Governance, benchmark analysis and performance evaluation.

KEYNOTES AND SHORT COURSE FOR YOUNG RESEARCHERS

Leading railway scientists from different disciplines and directors of the railway industry will give keynote speeches. A short course on Timetabling and Traffic Management Principles will be offered optionally to young researchers on 23 March 2015. More details will be announced in due time.

ORGANIZATION

The 6th International Conference on Railway Operations Modelling and Analysis will be held at the Chiba Institute of Technology in Tokyo March 23 – 26, 2015. The organizing committee consists of:

- I.A. Hansen (Delft University of Technology)
- N. Tomii (Chiba Institute of Technology)
- C. Hirai (Railway Technical Research Institute).

SCIENTIFIC ADVISORY COMMITTEE

- C.P.L. Barkan (University of Illinois)
- J. Imaizumi (Toyo University)
- L. Nie (Beijing Jiaotong University)
- Y-C. Lai (National Taiwan University)
- A. Oetting (Technical University of Darmstadt).
- D. Pacciarelli (University of Rome Tre)
- A. Wardrop (WorleyParsons, Australia).

ABSTRACT AND PAPER SUBMISSION

Prospective presenters of contributed papers should submit an extended abstract emphasizing to its innovativeness and relevance to a maximum of 1000 words (excluding list of key references) to <http://railtokyo2015.cs.it-chiba.ac.jp> before **August 1, 2014**. The abstracts will be reviewed by members of the Organizing Committee and the Scientific Advisory Committee. The authors of abstracts will be notified September 15, 2014. Draft papers of a maximum length of 20 pages are to be submitted by **November 15, 2014** in accordance with submissions to the Journal of Rail Transport Planning & Management (<http://www.elsevier.com/journals/journal-of-rail-transport-planning-and-management/2210-9706/guide-for-authors>) either as single WORD or PDF file.

The papers will be reviewed by independent experts from at least two countries until January 15, 2015. The accepted final papers will be distributed to all participants at the beginning of the conference by CD-ROM or USB-stick. The best papers will be eligible for publication in the Journal of Rail Transport Planning & Management (JRTPM). Professionals and researchers from the railway industry are also encouraged to present practical studies and open research issues for discussion. The presentation files of the talks will be made available after the conference on the conference website.

YOUNG RAILWAY OPERATIONS RESEARCH AWARD

Excellent papers on innovative research carried out and presented by participants not older than 35 years are eligible for the YOUNG RAILWAY OPERATIONS RESEARCH AWARD sponsored by the Board of IAROR. The Award is worth €2,500. Candidates are requested to register separately. The winner will be announced at the end of the conference.

REGISTRATION

Academics and professionals working on similar topics as listed above are cordially invited to pre-register for participation as soon as possible via the conference website <http://railtokyo2015.cs.it-chiba.ac.jp>. The seminar fee for researchers from academic institutes is 55,000 JPY (€350), while it is 75,000 JPY (€500) for employees from private companies. The fee is to be paid after confirmation of registration before **March 1, 2015**.