

Rail 
Newcastle
conference
2015

15-17 July 2015

@ Newcastle University

Conference Programme

organised by

newrail 

Venue: Research Beehive
1st floor, Old Library Building
Newcastle University
Newcastle upon Tyne, NE1 7RU, UK

- 09:00** Opening
Prof Mark Robinson, Director of NewRail, UK
- 09:15** Welcome message
Dr Marin Marinov, Rail Education Group Manager, NewRail, UK

Keynote speakers

- 09:30** Development of a European Community Rail Authorisation process
Prof John Roberts, Kasetsart University, Thailand
- 10:00** State-of-the-art of urban rail transit in China
Prof Baomig Han, Beijing Jiaotong University, China

10:30 **Coffee break**

- 11:00** A great idea - who wants it and how do they know that they want it?
David Prescott, Transport Scotland Rail Directorate, UK
- 11:30** Leadership talent: a study of the potential of people in the Australian rail industry
Dr Janene Piip, JP Research & Consulting, Australia

12:00 **Lunch break**

A buffet lunch will be served in The Courtyard dining area, Old Library Building, Newcastle University

Session topic: Rail operations, management and economics
Moderator: Dr Marin Marinov, NewRail, UK

- 13:00** The economic viability of a parallel Cross Country route for England
David Worsley, Newcastle University, UK
- 13:20** Definition of energy-efficient speed profiles within rail traffic by means of supply design models
Valerio De Martinis, Ulrich A. Weidmann, ETH Zürich, Switzerland
- 13:40** Operation of freight railways in densely used mixed traffic networks – an impact model to quantify changes in freight train characteristics
Tobias Fumasoli, Dirk Bruckmann, Ulrich Weidman, ETH Zürich, Switzerland
- 14:00** Simulation modelling of Vitória-Minas closed-loop rail network
Reinaldo Pimentel Loyola Meireles, **Marta Monteiro da Costa Cruz**, Carlos Henrique Fernandes de Faria, Federal University of Espirito Santo, Brazil
- 14:20** Plan and schedule an efficient heavy rail track maintenance through a Decision Rules Model
Rui Santos, Instituto Superior Tecnico, Portugal

14:40 **Coffee break**

- 15:00** Benchmarking suburban, regional and freight train driving styles in a mixed-traffic railway
Jonathan P. Powell, Roberto Palacin, Newcastle University, UK
- 15:20** Modelling and optimising periodic timetables on single track lines: improving the service quality through infrastructural adjustments and advanced control systems
Nicola Coviello, Politecnico di Torino, Italy
- 15:40** Railways regulation-critical factors for a successful management: The Spanish HSR experience
Aurora Ruiz-Rua, Pompeu Fabra University, Spain
- 16:00** Shunting yard simulation with synchronous decision integration
Benno Hüttler, Nikola Ilo, Manfred Gronalt, University of Natural Resources and Life Sciences, Austria
- 16:20** Modelling the influence of wagon technical parameters on variable costs in rail freight transport
Anna Dolinayová, Martin Loch, Juraj Kanis, University of Žilina, Slovakia
- 16:40** Contempotaty state of level crossing safety in Bulgaria and way to improve it.
Nikolay Georgiev, Ivaylo Stoyanov, **Violina Velyova**, Silvia Krasteva, Higher School of Transport 'Todor Kableshkov', Bulgaria (TBC)
- 17:00** Closure

Wednesday 15 July 2015

AFTERNOON ROOM
SESSION 2

Session topic: Rail engineering

Moderator: **Prof Stefano Ricci**, La Sapienza, Italy

13:00 Development of a simulation tool for the dynamic analysis of railway vehicle-track interaction
Ramy E. Shaltout, Luis Baeza, Cristian Ulianov, Newcastle University, UK

13:20 A framework for categorizing risks in High Speed Train (HST) Projects: the example of the first HST in Brazil.
Viviane V. F. Grubisic, Elisete S. S. Zagheni, **Yesid Asaff**, Acires Dias, Federal University of Santa Catarina, Brazil

13:40 Proposal and application of methodology of revitalisation regional railway track in Slovakia and Serbia
Jaroslav Masek, Sanjin Milinkovic, Martin Kendra, Slavko Veskovc, Dalibor Barta, University of Zilina, Slovakia

14:00 Rare earth elements in railway infrastructure – potentials for an information system as a tool for operators and other stakeholder
Frank Michelberger, Hirut Grossberger, Peter Judmaier, University of Applied Sciences St. Pölten, Austria

14:20 Crash safety of a typical bay table in a railway vehicle
Emmanuel Matsika, Qian Peng, Newcastle University, UK

14:40 **Coffee break**

15:00 3D Laser scanning technique for the inspection and monitoring of railway tunnels
Han-Mei Chen, Cristian Ulianov, Ramy Shaltout, Newcastle University, UK

15:20 Development of Origin-Destination Matrix (OD Matrix) of the Public Passenger Transport and the use of the railway line that crosses the urban area of Santos Dumont city - Minas Gerais - Brazil - extreme of the extreme to transport loads
Lisleandra Machado, Neuzete Pires Ferreira, Patrick Bastos Novaes, Iago Pereira Passos, Yohana Helena Silva da Silveira, Bárbara Ferreira da Rocha Lemos, Júlia Machado de Souza Freitas, Instituto Federal de Educação, Brazil

15:40 The Methodology of rating quality standards in the regional passenger transport
Vladislav Zitrický, Jozef Gašparík, Lumír Pečený, University of Zilina, Slovakia

16:00 Personal Smart Travel Agent for empowering Persons with Disabilities using public transport
Jörn Schlingensiepen, Gudrun Stockmannsb, Edwin Naroskab, Oliver Christenb, Tobias Boltentb, TH Ingolstadt, Germany

Wednesday 15 July 2015

AFTERNOON ROOM
SESSION 2

16:20 Assessing steam locomotive dynamics and running safety by computer simulation
Dāvis Bušs, Riga Technical University, Latvia

16:40 Railway capacity estimation – study case on Romanian railway network
Camelia-Cristiana Bunea, **Florin Codrut Nemtanu**, Stefan-Gabriel Soriga, Politehnica University of Bucharest, Romania (TBC)

Wireless communication architecture between outside equipment and Interlocking system
Circeag Mircea Alexandru, **Florin Nemtanu**, University POLITEHNICA of Bucharest, Romania (TBC)

On the effectiveness of operator console displays used in railway operation centers
Luigi-Gabriel Obreja, **Florin Nemtanu**, University POLITEHNICA of Bucharest, Romania (TBC)

17:00 Closure

Free evening

Newcastle upon Tyne sightseeing recommended.
Please visit NewcastleGateshead website for details of tourist attractions and local events:

www.newcastlegateshead.com



Session topic: Urban rail transit and light rail

Moderator: **Prof Baomig Han**, Beijing Jiaotong University, China

- 09:20** Testing the efficacy of platform and train passenger boarding, alighting and dispersal through innovative 3D agent based modelling techniques
Selby Coxon, Tom Chandler, Elliott Wilson, Monash University, Australia
- 09:40** The circumvention of barriers to urban rail energy efficiency
Paul Batty, Roberto Palacin, Newcastle University, UK
- 10:00** Comparative assessemnt of virtual track circuit based on image processing
Florin Codruț Nemțanu, Dorin Laurențiu Buretea, Luigi Gabriel Obreja Politehnica University of Bucharest, Romania
- 10:20** Public perception of driverless trains
Anna Fraszczyk, Philip Brown, Suyi Duan, Newcastle University, UK

10:40 Coffee break

- 11:00** Passenger stability within moving railway vehicles: limits on maximum longitudinal acceleration
Jonathan P. Powell, Roberto Palacin, Newcastle University, UK
- 11:20** Direct observations of pedestrian unsafe crossing at urban Australian level crossings
Teodora Stefanova, Jean-Marie Burkhardt, Christian Wullems, Andry Rakotonirainy, Patricia Delhomme, Queensland University of Technology, Australia
- 11:40** Attitudes of metro drivers towards design of immediate physical environment and system layout
Aleksandrs Rjabovs, Roberto Palacin, Newcastle University, UK

12:00 Lunch break

Session topic: Rail freight and logistics

Moderator: **Dr Dewan Islam**, NewRail, UK

- 09:20** Futuristic multimodal business model for European freight railways: a survival and revival strategy
Anuradha Jain, Consulting Partners St. Gallen, Switzerland
- 09:40** Organization of railway freight transport between Slovakia and Ukraine
Borna Abramovic, Vladislav Zitricky, Vedran Biškup, University of Zagreb, Croatia
- 10:00** State-of-the-art European rail freight system and future needs
Dewan Islam, Stefano Ricci, Bo-Lennart Nelldal, Newcastle University, UK
- 10:20** Swiss Split – a holistic approach for distributing containers to private sidings
Dirk Bruckmann, Patrik Dober, Albert Mancera, Irmhild Saabel, Ulrich Weidmann, ETH Zürich, Switzerland

10:40 Coffee break

- 11:00** Increasing security of transportation of dangerous goods in related European research projects
Alena Loudová, Petr Kroča, OLTIS Group, Czech Republic
- 11:20** A cost-benefit analysis methodology for innovative railway services
Giuseppe Siciliano, Francesco Barontini, Carlo Vaghi, Dewan Md Zahurul Islam, Ross Jackson, Thomas H Zunder, Stefan Mahler, Ilaria Grossoni, Aniruddha Kaushal, Simon Iwnicki, Ming Chen, Igor Davydenko
- 11:40** Railway industry roadmap in the state of Santa Catarina, Brazil
Acires Dias, Alvaro G. R. Lezana, Jonny C. da Silva, Dante Juliatto, Heitor H. Kagueiama, Carolina Resende Haddad, Maurício Uriona Maldonado, Federal University of Santa Catarina, Brazil (TBC)

12:00 Lunch break

Thursday 16 July 2015

AFTERNOON ROOM
SESSION 1

Session topic: Leadership, learning and history in the railway industry

Moderator: **Dr Janene Piip**, JP Research & Consulting, Australia

- 13:00** Analysis of benefits to young rail enthusiasts of participating in extracurricular academic activities
Anna Fraszczyk, Joseph Dungworth, Marin Marinov, Newcastle University, UK
- 13:20** Training of PTE teachers: building the teaching knowledge in the daily school routine
Neuzete Ferreira, Lisleandra Machado, Instituto Federal de Educação, Brazil
- 13:40** A successful cooperation between academia and industry in higher rail education: the postgraduate course in "Railway Infrastructure and Systems Engineering" at Sapienza
Luca Rizzetto, Gabriele Malavasi, Stefano Ricci, Noemi Montaruli, Nicoletta Abbascià, Riccardo Risica, Giovanni Bocchetti, Federico Gherardi, Alessandra Raffone, Sapienza Università di Roma, Italy
- 14:00** Pedagogical methods used in signalling training at Campus Santos Dumont in Brazil
André Diniz de Oliveira, Marcus Vinicius de Paiva, Fernando Paulo Caneschi, Instituto Federal de Educação, Brazil
- 14:20** The resurgence of education in railway and metro engineering in Brazil
Yesid Asaff, Viviane V. F. Grubisic, Regis Kovacs Scalice, Acires Dias, Federal University of Santa Catarina, Brazil (TBC)

14:40

Coffee break

STUDENTS' PRESENTATIONS

Moderator: **Dr Marin Marinov**, NewRail, UK

- 15:00** Rail liberalisation in the EU: the application to Thailand's context
Thanaphon Charanwanitwong, Newcastle University, UK
- 15:20** Modal choice problem for services between Newcastle and London
Yisong Ji, Newcastle University, UK
- 15:40** New designs for interchanges
Raphael Kling-David, Newcastle University, UK
- 16:00** Closure

Thursday 16 July 2015

AFTERNOON ROOM
SESSION 2

DISSEMINATION ROUTE

Moderator: **Prof John Roberts**, Kasetsart University, Thailand

- 13:00** Regional trams and light rail systems: barriers, opportunities and critical success factors to innovative core-periphery connections
Iqbal Hamiduddin, Charles King, Colin Osborne, University College London, UK
- 13:20** Innovation vs Standardization - The example of wheelsets
Michel Pineau, SNCF, France
- 13:40** What future for rail freight in Europe?
Philip Mortimer, Newcastle University, UK
- 14:00** Suitability of tilting technology to the Tyne and Wear metro system
Ovuezirie Darlton Agajere, Marin Marinov, Newcastle University, UK
- 14:20** SubEx Freight Systems™: a dual use design for moving small package freight on urban rail systems
Bruce Cahlan, Urban Logic Inc., US

14:40

Coffee break

- 15:00** Ergonomic risks anticipation in a tires multinational industry - a case study
Livia Ávila, Lisleandra Machado, Instituto Federal de Educação, Brazil
- 15:20** Development of rail crashworthiness in Europe
John Roberts, Mark Robinson, George Kotsikos, Kasetsart University, Thailand
- 15:40** Influence of a potential railway line connecting the Caspian Sea with the Black Sea on the development of Eurasian trade
Aleksander Sladkowski, Maria Cieśla, Silesian University of Technology, Poland (TBC)
- 16:00** History and development perspectives of metro in Poland
Maria Cieśla, Katarzyna Turoń, Silesian University of Technology, Poland (TBC)
- 16:20** Closure

20:00 CONFERENCE DINNER @ Northern Stage

Venue: Northern Stage
Barras Bridge, Newcastle upon Tyne
NE1 7RH, UK

- 08:30** Registration and coffee
- 09:00** Welcome and introduction to the Railway Talents project and online platform by Nathalie Amirault, UIC
- 09:30** Keynote speaker:
Janene Piip, JP Research & Consulting, Australia
What is Talent management and why is it so critical for companies competitiveness and sustainability? Talent management policies and practices across the world and sectors.
- 10:00** Keynote speaker:
Roy Rowlands, UK Rail Industry Training Trust, UK
What have we done as a business to engage with young people to promote careers in the rail industry?
- 10:30** Speed networking session
(Please bring your business cards with you)
- 11:30** Networking in the museum (and exhibitions sightseeing)

12:00 **Lunch break**

- 13:00** World cafe workshops' Introduction by Nathalie Amirault, UIC
- 13:15** Workshop 1: **How to attract and engage Talents?**
- 14:15** Workshop 2: **How to develop and grow Talents?**
- 15:15** Coffee break
- 15:30** Workshop 3: **How to retain and commit Talents?**
- 16:30** Workshops' summary
- 17:00** Closure

'The World Café' workshops

The World Café conversation is a creative process for leading collaborative dialogue, sharing knowledge and creating possibilities for action. Participants are split into groups of 4 people sitting at each table and discussing topics given.

Please take notes as a group and feed back your thoughts to the delegates at the end of the session.

Topic of the workshop:

How can we collectively make the railway sector irresistible for the best talents in the job market

?

Venue: Great North Museum: Hancock
Barras Bridge
Newcastle upon Tyne
NE2 4PT, UK