15-17 July 2015
@ Newcastle University
Conference Programme

organised by

Venue: Research Beehive
1st floor, Old Library Building
Newcastle University
Newcastle upon Tyne, NE1 7RU, UK
Wednesday 15 July 2015

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

09:30 State-of-the-art of urban rail transit in China
Prof Baomig Han, Beijing Jiaotong University, China

10:00 A great idea - who wants it and how do they know that they want it?
David Prescott, Transport Scotland Rail Directorate, UK

10:30 Leadership talent: a study of the potential of people in the Australian rail industry
Dr Janene Piip, JP Research & Consulting, Australia

10:45 Coffee break

11:00 A buffet lunch will be served in The Courtyard dining area, Old Library Building, Newcastle University

Room 1

09:00 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 Contemporat state of level crossing safety in Bulgaria and way to improve it.
Nikolay Georgiev, Iavylo Stoyanov, Violina Velyova, Silvia Krasteva, Higher School of Transport 'Todor Kableshev', Bulgaria (TBC)

17:00 Closure
**Wednesday 15 July 2015**

### Session topic: Rail engineering

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

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>13:00</td>
<td>Development of a simulation tool for the dynamic analysis of railway vehicle-track interaction</td>
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<td>Ramy E. Shaltout, Luis Baeza, Cristian Ulianov, Newcastle University, UK</td>
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<td>13:20</td>
<td>A framework for categorizing risks in High Speed Train (HST) Projects: the example of the first HST in Brazil.</td>
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<td>Viviane V. F. Grubisic, Elisete S. Z. Zagheni, Yesid Asaff, Acires Dias, Federal University of Santa Catarina, Brazil</td>
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<td>13:40</td>
<td>Proposal and application of methodology of revitalisation regional railway track in Slovakia and Serbia</td>
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<td>Jaroslav Masek, Sanjin Milinkovic, Martin Kendra, Slavko Veskovic, Dalibor Barta, University of Zilina, Slovakia</td>
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<td>14:00</td>
<td>Rare earth elements in railway infrastructure – potentials for an information system as a tool for operators and other stakeholders</td>
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<td>Frank Michelberger, Hirut Grossberger, Peter Judmaier, University of Applied Sciences St. Pölten, Austria</td>
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<td>14:20</td>
<td>Crash safety of a typical bay table in a railway vehicle</td>
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<td>Emmanuel Matsika, Qian Peng, Newcastle University, UK</td>
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### Coffee break

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<tr>
<th>Time</th>
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<tr>
<td>15:00</td>
<td>3D Laser scanning technique for the inspection and monitoring of railway tunnels</td>
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<td>Han-Mei Chen, Cristian Ulianov, Ramy Shaltout, Newcastle University, UK</td>
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<td>15:20</td>
<td>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</td>
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<td>Lisleandra Machado, Neuzete Pires Ferreira, Patrick Bastos Novaes, Iago Pereira dos Passos, Yohana Helena Silva da Silveira, Bárbara Ferreira da Rocha Lemos, Júlia Machado de Souza Freitas, Instituto Federal de Educação, Brazil</td>
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<td>15:40</td>
<td>The Methodology of rating quality standards in the regional passenger transport</td>
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<td>Vladislav Zitrický, Jozef Gašparík, Lumír Pečený, University of Zilina, Slovakia</td>
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<td>16:00</td>
<td>Personal Smart Travel Agent for empowering Persons with Disabilities using public transport</td>
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<td>Jörn Schlingensiepen, Gudrun Stockmannsb, Edwin Naroskab, Oliver Christenb, Tobias Boltenb, TH Ingolstadt, Germany</td>
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### Free evening

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

[www.newcastlegateshead.com](http://www.newcastlegateshead.com)
Thursday 16 July 2015

**MORNING SESSION ROOM 1**

**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 Battley](#), Roberto Palacin, Newcastle University, UK

10:00 Comparative assessment of virtual track circuit based on image processing  
[Florin Codrut Nemtanu](#), Dorin Laurenju Buretea, Luigi Gabriel Obreja, Politehnica University of Bucharest, Romania

10:20 Public perception of driverless trains  
[Anna Fraszczyk](#), Philip Brown, Suji 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 Burkhart, Christian Wullems, Andry Rakotorainray, Patricia Delhomme, Queensland University of Technology, Australia

11:40 Attitudes of metro drivers towards design of immediate physical environment and systems layout  
[Aleksandrs Rjabovs](#), Roberto Palacin, Newcastle University, UK

12:00 Lunch break

Thursday 16 July 2015

**MORNING SESSION ROOM 2**

**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. Gaen, Switzerland

09:40 Organization of railway freight transport between Slovakia and Ukraine  
[Borna Abramovic](#), Vladoslav Stricky, Vedran Biskup, 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, Irnhild 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 Loudova](#), Petr Kroca, OLTIS Group, Czech Republic

11:20 A cost-benefit analysis methodology for innovative railway services  
[Giuseppe Siciliano](#), Francesco Barontini, Carlo Vaghi, Dewan Md Zahirul 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 Julioatto, Heitor H. Kagueiama, Carolina Resende Haddad, Maurício Uronia Maldonado, Federal University of Santa Catarina, Brazil (TBC)
Thursday 16 July 2015

AFTERNOON SESSION
ROOM 1

Session topic: Leadership, learning and history in the railway industry
Moderator: Dr Janene Plip, 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 Camisoli, 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, Acris 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 SESSION
ROOM 2

DISSEMINATION ROUTE
Moderator: Prof John Roberts, Kasetart 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 Cahan, Urban Logic Inc., US

14:40

Coffee break

STUDENTS’ PRESENTATIONS

15:00

Ergonomic risks anticipation in a tires multinational industry - a case study
Lívia Ávila, Lisleandra Machado, Instituto Federal de Educação, Brazil

15:20

Development of rail crashworthiness in Europe
John Roberts, Mark Robinson, George Kotsikos, Kasetart 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?