



International Seminar for
Railway Education and Training



2018 International Seminar for Railway Education and Training

Monday 16 to Wednesday 18 April 2018
at The University of Birmingham, UK

The Birmingham Centre for Railway Research and Education, in collaboration with its industry based partners MTR Academy of Hong Kong and SMRT Institute of Singapore, invites you to the inaugural **International Seminar for Railway Education and Training (ISRET 2018)**, to be held at the University of Birmingham, from 16 to 18 April 2018.

Demand for the services of the world's railway industry continues to grow rapidly, thanks to accelerating urbanisation and the realisation that the impact of transport activities on the environment must be reduced. Thus, the railways must satisfy the demands of increasingly sophisticated users in ever greater numbers. The passenger expects safety, shorter journey times, greater convenience and more comfort on board, while freight shippers and logistics companies need economic, timely and reliable collection and delivery of goods. Public bodies are having to reduce subsidies and other forms of financial support, while tasking the world's railways with delivering better environmental performance in terms of emissions, noise and vibrations. Today, it is often the railways' competitors that are setting the gold standard in these areas. Thus, excellence and sustained professionalism in all aspects of railway operations, railway engineering and management are becoming critical to the railways' survival and success. Only high standards of education and training will allow the railways to address the challenges of:

- Lowering the workforce age profile of long established railways, while maintaining competence;
- Encouraging well-educated and well-trained young people to enter all levels of the railway professions;
- Developing the high skill levels in design, implementation, operation and maintenance that are necessary for introducing and using complex technologies in the railway industry;
- Transferring operational and technical expertise from experienced to new staff to ensure the robust performance of all types of railway, from very high-speed lines to high capacity urban systems and to trams;
- Applying best international practice in railway management to use existing infrastructure, rolling stock and other assets to the limit of their capability without risking rapid degradation, incidents and accidents.

ISRET 2018 provides a forum for senior managers and engineers, educators and trainers, human resources staff, operators, maintainers, government bodies and other stakeholders to present and discuss training and education best practice, new teaching methods and learning technologies and how these might be best applied to serve the modern railway.

Seminar Objectives

The objectives of ISRET 2018 are to:

- Identify the education and training challenges that must be addressed by the metro and mainline industry;
- Establish and disseminate best practice in railway education and training;
- Develop international partnerships between education institutions, training providers and employers;
- Learn from the education and training expertise of The University of Birmingham, MTR Academy, SMRT Institute, the Singapore Rail Academy, NTAR, NSAR, the High-Speed Rail College in Birmingham and other experts in the field.

Call for Papers

We invite participants to submit abstracts for papers and presentations that address the challenges and objectives given above. Abstracts should focus on the following suggested themes:

- Economy, Reliability and Safety through the Development of People;
- Railway Industry's Challenges (Workforce Development);
- Railway Industry's Challenges (Equality, Diversity and Inclusion);
- Railway Education informed by Railway Research;
- Research into Railway Education and Training;
- Generalist Skills vs. Systems Engineering Skills vs. Specialist Skills;
- Innovative Approaches to Railway Education;
- Innovative Approaches to Railway Training;
- Innovative Approaches to Knowledge/Competency Transfer
- Innovative High-Performing Asset Management
- International Relationships in Railway Education and Training;

Please submit your abstract of no more than 250 words via email to isret2018@contacts.bham.ac.uk, with the subject line '**ISRET 2018 Abstract: name and organisation**', by the 31st January 2018 for review by our technical panel. The submission deadline for the full conference paper / presentation is 2 March 2018. Well received papers will be published in a special issue of Birmingham's in-house Journal of Education.

Seminar Organising Committee (To be confirmed)	Seminar Technical Committee (To be confirmed)
Carolyn Griffiths, Former Head of RAIB (Chair)	Heather Close, University of Birmingham (Chair)
Morris Cheung, MTR Academy, Hong Kong	Alex Burrows, Alstom, UK
Dr Rob Ellis, University of Birmingham	Dr Holly Foss, University of Birmingham
Joy Grey, University of Birmingham	Dr Mark Ho, MTR Academy, Hong Kong
Robert Hopkin, Rail Alliance	Huey Ling Kang, SMRT, Singapore
Prof Clive Roberts, University of Birmingham	Dr Hongsin Kim, University of Birmingham
Prof Felix Schmid, University of Birmingham	Françoise Manderscheid, Ecole Nationale des Ponts
Nadeen Taylor, University of Birmingham	Torstein Nielsen, Ramboll, Denmark
	Prof Felix Schmid, University of Birmingham

Format of the International Seminar

Day	Date	Activities
Day 1 / Monday	16 April 2018	Seminar, exhibition and networking followed by a Gala Dinner at Birmingham Council House (for all delegates).
Day 2 / Tuesday	17 April 2018	Seminar, exhibition and networking followed by the meeting of a Working Group (by invitation).
Day 3 / Wednesday	18 April 2018	Education and Training Workshops at The University of Birmingham or/... Visit and tour of Alstom's Widnes Training Centre, including the opportunity to try VR spray painting (coach transportation provided).

Gala Dinner

In the heart of Birmingham's city centre, the Council House is a beautiful Grade II listed building. Since its opening, this venue has received and welcomed members of the Royal Family, world leaders, businesses and global organisations. This will be the setting for the Gala Dinner on Monday 16 April with a drinks reception from 18:30 and dinner from 19:30 onwards.

Keynote speakers include: Kathleen Armour, Pro-Vice-Chancellor (Education) at The University of Birmingham; Steve Featherstone, President of the Permanent Way Institution (PWI); Clair Mowbray, CEO of the National College of High Speed Rail (NCHSR); and Michelle Nolan-McSweeney, Head of Training Strategy at Network Rail.

Registration Fees

Participation Tier	Standard Rate	UoB Graduate or YRP Member Rate	UoB Student Rate
3-day Seminar including Gala Dinner and either the UoB Education and Training Workshop or a visit to Alstom's Widnes Training Centre	£ 530	£ 400	£ 200
2-day Seminar only which includes a seat at the Gala Dinner	£ 450	£ 350	£ 150
Education and Training Workshop only	£ 150	£ 100	£ 50
Visit to Alstom's Widnes Training Centre	£ 115	£ 65	£ 50
Exhibition stand and access for one person to the 2 day Seminar and Gala Dinner	£ 1000	n.a.	n.a.

Request for Letter of Invitation

If you require a letter of invitation for visa purposes, please request an application form from [Nadeen Taylor](#). Scan the completed form and send it by e-mail to isret2018@contacts.bham.ac.uk, with the subject line '**Visa invitation letter request**'. The invitation letter will be sent via email and it may take up to 5 working days to process.

For more information about the conference or sponsorship opportunities, please contact:

isret2018@contacts.bham.ac.uk or visit our website:

<https://www.birmingham.ac.uk/research/activity/railway/events/ISRET-2018.aspx>.

Birmingham and the Midlands

Birmingham was the destination of the first long distance railway in the world, the London and Birmingham Railway, built by Robert Stephenson. It is the de-facto capital of the Midlands region of Great Britain, in the centre of England. It is close to London and within 2 hours' travel of 75% of Britain's population. Birmingham has been involved in the building trains and railways for nearly 200 years and, today, is on the fast track for a new rail revolution, driven by the construction of HS2, the new high-speed railway from London to Birmingham, Manchester and Leeds. The fabric and structure of the city are changing rapidly, thanks to the opportunities offered by HS2, better performance suburban services and modern tramways. The headquarters of HS2 has recently been moved to Birmingham and the Midlands as a whole are expected to benefit greatly from their involvement in the High-Speed 2 project. At a projected cost of £55bn it is one of the largest global infrastructure investment programmes ever.

The Birmingham Centre for Railway Research and Education (BCRRE) at The University of Birmingham is at the centre of the digital railway revolution in the Midlands. BCRRE was established in 2003 and is leading a collaboration between the railway industry and academia to establish the UK Rail Research and Innovation Network (UKRRIN), a group of five Centres of Railway Excellence. The UKRRIN Centre of Excellence in Digital Systems will be located in Birmingham alongside BCRRE. The railway centre has also recently been awarded the prestigious Queen's Anniversary Prize 2017 for Higher and Further Education for supporting the UK's rail industry through research, practical innovation and education.

BCRRE provides both undergraduate and postgraduate degrees in railway engineering, including the prestigious MSc in Railway Systems Engineering and Integration, MSc in Railway Risk and Safety Management and the MRes in Railway Systems Integration. BCRRE has a collaborative teaching arrangement with SMRTi in Singapore for the provision of a postgraduate certificate in Urban Railway Engineering (Singapore) and close ties with Beijing Jiaotong University, Southwest Jiaotong University, University of Illinois Urbana-Champaign and École National des Ponts et Chaussées. The university is expecting to offer degree apprenticeships following the approval of the UK Rail and Rail Systems Degree Apprenticeship trailblazer scheme.

The National College for High-Speed Rail, a new specialist railway education and training institution supported by BCRRE opened its doors in September 2017, with campuses in Birmingham and Doncaster. Their innovative approach to teaching includes the repurposing of two donated Eurostar power cars to create a virtual reality teaching environment.

The National Training Academy for Rail (NTAR), a collaboration between the National Skills Academy for Rail (NSAR), the Department for Business Innovation & Skills (BIS) and the Department for Transport (DfT), in collaboration with Siemens, provides traction and rolling stock courses for a new generation of workers from their Northampton training centre.

Slightly further afield, in Widnes near Liverpool, Alstom have opened a new facility that includes their own rail academy. The company has plans to train 500 apprentices over the next five years. The site is also the largest rolling stock modernisation facility in the UK and it is here that the entire fleet of Class 390 Pendolinos, used by Virgin on the West Coast Main Line, is undergoing a half-life refurbishment. It is the location for and industry visit on Wednesday, 18 April 2018.

It is not all about railways though: the West Midlands was home to Shakespeare, Robin Hood, JRR Tolkien and Sir Isaac Newton. Birmingham itself is a great place to live, work and visit. From small independent shops and craft breweries, to iconic retail stores, designer outlets and Michelin-starred restaurants. When looked at from above it is easy to see that it is a city with a vast amount of green space, both private and public. It has easy access to the rolling Malvern Hills and the Shropshire countryside. There is plenty to explore and savour in this vibrant city and its environs.

