RAILWAY ENGINEERING 2019

15TH INTERNATIONAL CONFERENCE & EXHIBITION

3RD - 4TH JULY 2019
Radisson Blu Hotel
Royal Mile, Edinburgh
EH1 1TH, Scotland

CALL FOR PAPERS
200 word abstract deadline:
20th December 2018
RAILWAY ENGINEERING 2019
Conference & Exhibition
3rd - 4th July 2019
Radisson Blu Hotel
Royal Mile, Edinburgh
EH1 1TH, Scotland

CALL FOR PAPERS
200 word abstract deadline:
20th December 2018

EXHIBITION OPPORTUNITY
2 DAY EXHIBITION
2.5M X 1.5M EXHIBITION SPACE
£1,100 + VAT
To book your space please call +44 (0) 131 447 0447
or email: exhibition@ecspublications.com

RECENT EXHIBITORS INCLUDED:
Anderton Concrete Products
Elsevier Ltd
Fimor SAS
Fugro Raildata
GERB GmbH & Co.KG
Gore
PWI – Permanent Way Institute
Railway Gazette International
SRL Technical Services LTD
Systra Ltd
University of Edinburgh
West-Ter Oy
Zetica Ltd

CONFERENCE AWARDS
AWARDS WILL BE MADE TO THE BEST PAPERS IN THE FOLLOWING CATEGORIES:
1. Railway Engineering Award
2. Railway Gazette International Innovation Award
3. Geophysics & NDT Award
4. Research Award
5. Railway Engineering Exhibition Award
To be eligible for a Conference Award, authors must register for the Conference and present their paper.

SPONSORED BY -
# THEME 1

**PERMANENT WAY, RAIL MAINTENANCE SIGNALLING & ELECTRIFICATION**

### HIGH SPEED RAIL ISSUES
- Track foundations
- Ground borne vibrations
- Critical track velocities & Rayleigh waves
- Slab track v ballast track
- Noise and Vibration reducing measures
- High speed track, including tilting trains

### ASSETS
- Asset databases
- Systems engineering
- Whole-life costing & Reliability analysis
- Maintenance resourcing

### MANAGEMENT
- Track asset management
- Journey time improvement

### RAIL ALIGNMENT & TRANSITION ZONES
- Curves, spirals, new algorithms
- Rail and track bed stresses at transitions
- Innovative measures

### TRACK BED
- Investigation & analysis
- Track design
- Track maintenance & monitoring
- Ballast life & maintenance
- Heavy Haul issues
- Formation treatment
- Ballastless track/slub track innovation

### SLEEPERS & TIES
- Design & rail fastening systems

### SWITCHES & CROSSINGS
- Maintenance and failures
- Turnout issues
- Turnout modelling and validation

### GEOTECHNICS & GEOTECHNOLGY
- Railway drainage
- Trackbed & Embankment stabilisation
- Rayleigh waves
- Use of georynthatics

### LIGHT RAIL - TRAM SYSTEMS
- Design
- Maintenance
- Cost savings

### WHEEL-RAIL CONTACT TRIBOLOGY
- Wheel/rail interaction
- Performance and failures
- Wheel rail noise & vibration
- Rail grinding & maintenance
- Rail inspection technology
- Rail steels - metallurgy & hardening
- Gauge corner cracking, corrugations etc
- Wheel rail traction & adhesion
- Heavy Haul issues
- Life prediction

### ELECTRIFICATION & LIGHTING

### SAFETY INTEGRITY LEVELS (SILs)

### HEAVY HAUL ISSUES

#### CASE STUDIES

---

# THEME 2

**OPERATION, SIGNALLING, ROLLING STOCK & RAILWAY AERODYNAMICS**

### RAILWAY OPERATION
- Scheduling
- Operational safety
- Maximising capacity & profitability
- Reliability and risk analysis

### SIGNALLING
- New technology in Signalling
- TPWS & ETCS
- Computer based interlocking
- Economics of Signalling
- Safety

### ROLLING STOCK & RAIL
- Interfaces at railway systems – track /rolling stock
- Vertical response of rolling stock on corrugated track
- Noise and vibrations

### RAILWAY AERODYNAMICS
- Cross winds
- Airflow through tunnels
- Sonic booms in tunnels

---

# THEME 3

**RAILWAY STRUCTURES & EARTHWORKS**

### ASSETS
- Asset databases
- Whole-life costing
- Reliability analysis

### BRIDGE DYNAMICS & REPAIR
- High Speed Railway Bridges
- Investigation & NDT of Railway Bridges
- Steel & Iron Railroad Bridges
- Concrete & Post-tensioned Concrete Bridges
- Masonry Arch Rail Bridges
- Heavy Haul Bridges
- Repair Procedures
- Advanced Composites in Rail Bridge Repair
- Dynamics of Railway Bridges

### RETAINING WALLS
- Investigation & Repair

### TUNNELS
- Investigation & Repair
- Fire in Rail Tunnels

### EARTHWORKS
- Embankments & slopes
- Heavy haul embankments
- Condition monitoring of embankments
- Stabilising earthworks
- Control of vegetation

### FOUNDATION SOLUTIONS
- Piled foundations

### HEAVY HAUL ISSUES

### CONTAMINATION CLEAN-UP

### STATION RENEWAL

### SAFETY & ACCESS ISSUES

### CASE STUDIES

---

SUBMIT YOUR ABSTRACT VIA www.railwayengineering.com
NETWORKING OPPORTUNITIES & SOCIAL EVENTS

ICEBREAKER

'Malt Whisky Tasting' with BBQ style food, beer and soft drinks. This is an excellent opportunity for Speakers and Delegates (from 30+ countries) and Exhibitors to network prior to the start of the Conference. Invitations will be issued to all Delegates (& their partners) and Exhibitors.

Tuesday 2nd July 2019
19.00 - 20.00
The Exhibition Hall

CONFERENCE BANQUET & LUNCHES

BANQUET

(Optional) @ £88 + VAT Tickets may be booked on the Registration Form, including tickets for guests.

Wednesday 3rd July 2019
19.30 for 20.00

LUNCHES

A hot fork buffet lunch with soft drinks will be offered to registered Delegates and Exhibitors each day. Conference lunches and all coffee and tea breaks will be served in the Exhibition Hall.

IMPORTANT DATES

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission of abstracts</td>
<td>20 December 2018</td>
</tr>
<tr>
<td>Notification of acceptance of abstract</td>
<td>10 January 2019</td>
</tr>
<tr>
<td>Submission of final paper</td>
<td>15 April 2019</td>
</tr>
<tr>
<td>Final registration date as a Presenting Author</td>
<td>30 April 2019</td>
</tr>
<tr>
<td>Submission of PowerPoint</td>
<td>12 June 2019</td>
</tr>
</tbody>
</table>

REGISTER ONLINE

railwayengineering.com

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Author</td>
<td>£399</td>
<td>£450</td>
<td>£500</td>
</tr>
<tr>
<td>Graduate Student Presenting Author</td>
<td>£299</td>
<td>£325</td>
<td>£355</td>
</tr>
<tr>
<td>Delegate (Not Presenting)</td>
<td>£450</td>
<td>£499</td>
<td>£550</td>
</tr>
<tr>
<td>Graduate Student (Not Presenting)</td>
<td>£255</td>
<td>£265</td>
<td>£280</td>
</tr>
<tr>
<td>Conference Dinner</td>
<td>£88</td>
<td>£88</td>
<td>£88</td>
</tr>
<tr>
<td>2-Day Exhibition Fee: 2.5m 1.5m Space</td>
<td>£1,100</td>
<td>£1,100</td>
<td>£1,100</td>
</tr>
</tbody>
</table>

Note: All fees are in UK £ GBP and are excluding UK VAT @ 20%