

RAILWAY ENGINEERING-2019



15TH International Conference & Exhibition

3rd - 4th July 2019

**Radisson Blu Hotel
Royal Mile
Edinburgh
EH1 1TH
Scotland**

Call-for-Papers

Abstract Deadline: 1st December 2018

www.railwayengineering.com

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 and 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/slab 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**