RAILWAY ENGINEERING-2019

15TH International Conference & Exhibition

3rd - 4th July 2019

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**

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### 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

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### 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**