

CALL FOR PAPERS

Conference Themes:

1. **ENHANCING THE CUSTOMER EXPERIENCE IN PUBLIC TRANSPORT**
 - a) Station design and architecture
 - b) Integration of transport modes
 - c) Ticketing and smart card systems
 - d) Information systems and communications

2. **DEVELOPMENT IN LIGHT RAIL SYSTEMS**
 - a) Corridor design and configuration
 - b) Grade separations - necessary or simply nice to have
 - c) Vehicle designs
 - d) Interfaces with heavy rail and bus networks
 - e) Economics of light rail systems
 - f) Importance of light rail to the urban fabric

3. **ADVANCES IN RAILWAY ENGINEERING - CIVIL INFRASTRUCTURE, ROLLING STOCK, OPERATIONS**
 - a) Design and construction of integrated rail transportation infrastructure (Infrastructure Advances) (Infrastructure General)
 - b) Improvements in rollingstock design (Rollingstock Automation) (Rollingstock General)
 - c) Vehicle/track dynamics and the wheel-rail interface (Track Interaction)
 - d) Inspection and condition monitoring systems
 - e) Operational and planning, network management and simulation modelling (Operations General)
 - f) Research and development

4. **SAFETY, PREVENTION & INVESTIGATION**
 - a) Risk assessment and management (Reducing Risk)
 - b) Human factors
 - c) Best practice in new safety procedures, technologies and management (Track Maintenance Advances)
 - d) Crashworthiness technologies
 - e) Train control technologies
 - f) Derailment safety
 - g) SPADs and their avoidance

5. **RAIL-RELATED SUPPLY CHAIN LOGISTICS**
 - a) Freight and network capacity
 - b) Economics and policy (Project Management Assurance)
 - c) Regional and long-distance railways
 - d) Intermodal freight including terminal design and operation; interfaces with roads and ports
 - e) Short haul rail

6. **UTILIZATION OF RESOURCES AND ENVIRONMENTAL SUSTAINABILITY**
 - a) Performance of existing railway structures in the context of sustainability (Rollingstock Sustainability)
 - b) Asset upgrading, modification and rehabilitation
 - c) Energy utilization and efficiency

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- d) Environmental impacts and strategies
- e) Alternate energy resources
- f) Strategies in achieving environmental friendly railways

7. HEAVY HAUL

- a) Network Operations (captive and interchange)
- b) Technology assisted train operations
- c) ECP braking systems
- d) Fuel trip optimization
- e) Distributed power (DP) operations
- f) Long freight trains
- g) Economics and Capacity for Growth
- h) Service reliability in all-weather conditions

8. ROLLING STOCK

- a) Wagon design and maintenance (time and condition-based)
- b) Improved wagon components (bogies, wheels/axles, brakes, train coupling systems and cast components)
- c) Motive Power
- d) Diesel and electric locos and performance
- e) Emerging motive power technologies (LNG, Fuel Cell, etc.)

9. TRACK AND STRUCTURES

- a) Improved track component designs, materials, rail, sleepers, switches and crossings
- b) Track foundation design, maintenance and diagnostics
- c) Bridge life extension, advanced designs, materials, and inspection

10. VEHICLE/TRACK SYSTEMS AND TRAIN DYNAMICS

- a) Vehicle/Track Interaction (dynamics, wheel/rail profiles, wheel/rail & RCF, friction control)
- b) Vehicle & track condition monitoring (detectors, data & repair management)
- c) Train Dynamics (longitudinal and braking)

11. SIGNALLING AND COMMUNICATIONS

- a) Signalling systems
- b) Advanced train control systems
- c) Increasing network capacity through enhanced signalling systems (Signals/Level Crossings) (Signals Automation)

12. CUSTOMER SERVICE (INTEGRATED OPERATIONS PLANNING/MANAGEMENT SYSTEMS)