

# JRC 2024

Joint Rail Conference

*Smart Technologies for Safer Railroads*

University of South Carolina, Columbia, SC

May 5-7, 2024



## Call for Abstracts

**JRC 2024** is the major, multidisciplinary railroad conference encompassing all aspects of rail transportation and engineering research.

Submit your abstract online at:

<https://event.asme.org/Joint-Rail-Conference>

Abstracts are due **October 23<sup>rd</sup>, 2023**

Abstracts are limited to a minimum of 400 words and a maximum of 650 words, text only. Paper submittal is encouraged but not required. Interested authors will be notified of abstract acceptance in early November.

JRC 2024 will be returning to the standard conference paper submission process. Conference paper submissions will be due December 4<sup>th</sup>, 2023 and will undergo the peer-review process. Publication of papers in conference proceedings requires author attendance and presentation at the conference in Columbia, SC.

### **Track 1: Railroad Infrastructure Engineering – Sponsored by ASCE**

Design, engineering, and construction of track, bridge structures and grade crossings; Geotechnical engineering of track substructure and right-of-way; Structural Health Monitoring; Best practices and advances in technology for the inspection and maintenance of the railroad infrastructure.

### **Track 2: Rolling Stock and Dynamics – Sponsored by ASME**

Motive power technology; vehicle/track interaction; wheels, couplers, components, and other equipment; rolling stock design, manufacturing, materials, and maintenance.

### **Track 3: Communication and Signals – Sponsored by IEEE**

Systems integration; track and wayside components; equipment components; positive train control; CBTC, Capacity improvements, Communications, Asset Management, Wireless crossings control; interoperability, and microprocessor control.

### **Track 4: Electrification – Sponsored by IEEE**

Catenary and third rail design; materials; efficiency; electrification approaches; design for high speeds; electromagnetic compatibility (EMC); corrosion control; load flow simulation; energy savings storage devices; regenerative braking; smart electrical supply.

### **Track 5: Operations and Systems Management**

Service availability and reliability; capacity models; impacts of aging equipment on service quality; freight railroad network optimization; asset planning; train scheduling.

### **Track 6: Safety and Security – Sponsored by UTCRS**

System safety approaches; safety data mgt; AI Safety Application; risk analysis; accident avoidance, survivability, and investigation; operations safety; human factors; safety improvements; hazmat risk mgt; security assurance; emergency preparedness and response.

### **Track 7: Passenger and Transit**

Investigations, insights, innovations, and implementations in all aspects of passenger rail transport.

### **Track 8: Railroad Industry: Past, Present, and Future**

A look to the past for railroad history, observations of present trends in the railroad industry, or a look the future of rail transportation.

*Please contact [toolboxhelp@asme.org](mailto:toolboxhelp@asme.org) with any questions.*