2017 Joint Rail Conference a great success.

The 2017 Joint Rail conference provided the attendees an opportunity to network with fellow engineers with similar goals and responsibilities. Over 200 rail transportation professionals attended this year’s conference. The attendees were provided 78 papers and the opportunity to visit shops or bridge projects.
In order to create a diverse and engaging technical program, conference organizers are seeking papers and presentations on novel research, application of advanced or non-traditional technology, and cutting-edge technology development from researchers active in academia, government and the private sector which have the potential for making a real impact on railroad operations, efficiency and safety.

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

Rail Equipment Engineering
Motive power technology, vehicle/track interaction, wheels, couplers, components, rolling stock design, manufacturing, materials, and maintenance.

Signal and Train Control Engineering
Systems integration, track and wayside components, equipment components, positive train control, interoperability, and microprocessor control.

Service Quality and Operations Research
Service availability and reliability, capacity models, impacts of aging equipment on service quality, transport mode integration especially with high-speed rail, passenger information systems and passenger reservation systems, freight railroad network optimization, asset planning, and train scheduling.

Planning and Development
Project management, planning & financing, new start and expansion development, service planning, environmental impact, and workforce development.

Safety and Security
System safety approaches, safety data management, risk analysis approaches, accident avoidance, accident survivability, train and employee safety, human-factors-informed safety improvements, hazmat risk management, security assurance, emergency preparedness and response.

Energy Efficiency and Sustainability
Energy conservation and efficiency, energy storage modeling, hybrid vehicles, emissions reduction and control and alternative energy sources.

Urban Passenger Rail Transport
Investigations, insights, innovations, and implementations in all aspects of urban passenger rail transport.

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

Vehicle-Track Interaction
Wheel/rail contact, best practices in testing methods and modeling tools, passenger and freight applications.

Railroad History
Topics may include notable structures, equipment, facilities and persons of historical interest to the railroad engineering community.

Abstracts can be submitted to: https://www.asme.org/events/joint-rail-conference. Abstracts must be in English and between 400 and 650 words in length. The abstract should include the following elements:

- An introduction that provides the motivation and purpose of the paper.
- The novelty and contribution of the work represented in the paper, with a clear statement distinguishing it from previously published papers. The paper must represent either the first publication of material or the first publication of an original compilation of information from a number of sources as specifically noted by footnotes and/or bibliography.
- The methodology used (e.g., experimental techniques, analytical, computational, etc.).
- Preliminary results and conclusions; identify known or expected results, which should clearly support the claims of novelty.

It is expected that all abstracts will address these elements to be considered for publication or presentation. Interested authors will be notified of abstract acceptance. Conference papers will be peer-reviewed and published in proceedings.

The ASME Rail Transportation Division is offering a limited number of conference scholarships for students. Please see the JRC2018 website for details: https://www.asme.org/events/joint-rail-conference

Joint Rail Conference co-sponsoring & partnering organizations:
Results of the First Annual JRC Grand Challenge

The 2017 JRC Grand Challenge question:

After many years of decline, the annual train accident rate for FRA reportable train accidents in the US has appeared to reach a plateau (Figure 1). How can the industry push through this plateau to achieve new levels of safety and further reduce train accidents in the US?

Figure 1. Train Accident Rate per Million Train Miles for All Class I Railroads (Including Amtrak), from 2006-2015 (Source FRA Office of Safety - safetydata.fra.dot.gov/OfficeofSafety/)

Four entrants vied for the prize associated with the challenge.

Artificial Intelligence for the Rail Industry
Dr. Parham Shahidi

Integrated Railway Safety Management
Dr. Xiang Liu

From Lag to Lead: The Next Step of Safety Improvement
Tu Huan Lin

Reducing Train Accidents Using Risk Management Strategies
Brandon Wang

The three judges Harold Harrison, Kevin Renze and Kevin Kessler discuss the presentations and select the winner of the First Annual Grand Challenge.

The winner is Dr. Parham Shahidi.

Please consider participating in the Second Annual Grand challenge at the 2018 JRC.
ASME Joint Rail Conference 2017 – Student Spotlight

Student Oscar O. Rodriguez (and his advisors) accepts Best Student Paper Award from Monique Stewart at the JRC 2017 banquet dinner in Philadelphia, PA on April 6, 2017

Each year the Rail Transportation Division of the ASME provides thousands of dollars of scholarship money, through the V. Terrey Hawthorne Memorial Graduate Student Scholarship Fund and the Swamidas K. Charan (John) Punwani Memorial Undergraduate Student Scholarship Fund. Since 2011, the ASME RTD has awarded over $140,000 in scholarships to promote student travel to the annual Joint Rail Conference. The ASME-RTD scholarship committee also coordinates a Best Student Paper Award each year. This year the Best Student Paper award went to Oscar O. Rodriguez, a graduate student in Mechanical Engineering at the University of Texas, Rio Grande Valley. Oscar also received a 2017 V. Terrey Hawthorne Memorial Graduate Student Scholarship.

Oscar was the lead author on a technical paper, “Hysteresis Heating of Railroad Bearing Thermoplastic Elastomer Suspension Element,” and presented this paper at the conference. His research investigated the internal heat generation in the suspension pad of a railroad bearing and its impact on bearing dynamics. Oscar is originally from San Juan, TX, and he completed a Bachelor’s of Science in Mechanical Engineering at the University of Texas, Rio Grande Valley, before moving on to his graduate studies. His current career goals are to work as an engineer in the private sector in either the railroad or automotive industry. Oscar was very grateful to receive this award and he would like to acknowledge his advisers Dr. Fuentes, Dr. Tarawneh and Dr. Jones who are also co-authors on the paper.

SAVE THESE DATES
JOINT RAIL CONFERENCES

2018 JRC: Chair, Dave Thurston, IEEE. April 18-21, 2018. Pittsburgh, PA, Omni William Penn Hotel. Theme: “Innovations That Move Commerce and People” Sponsorships, ads and exhibit space are available.


2020 JRC: Chair, Giuseppe Sammartino, ASME. April 21-24, 2020. St. Louis, MO, St. Louis Union Station Hotel, Curio Collection by Hilton. 100th Anniversary of RTD! The first ASME-IEEE JRC was in St. Louis in 1920.
RTD Needs Volunteers to Staff the Committees Necessary to Provide Continuing Opportunities to You, Our Committee Members Can Make the 2018 JRC Even Better than the Very Successful 2017 JRC!

RAIL TRANSPORTATION DIVISION COMMITTEE POSITIONS

We are seeking volunteers to serve on RTD committees where you can contribute to the rail industry and your profession.

The mission of the Rail Transportation Division of the ASME is to manage the effective dissemination of technical information by providing technical forums to discuss advances in the profession and to advance the art, science and practice of mechanical engineering and related disciplines aimed at improvements in safety and productivity of rail transportation systems.

The vision of RTD is to be the premier organization for the development and dissemination of technical knowledge concerning mechanical engineering and related practices in the field of mechanical engineering applied to the rail transportation industry.

Currently positions open are:
- Chair - Publicity
- Asst. Chair - Publicity
- Chair - Scholarships
- Asst. Chair - Scholarships
- General Committee

If you are interested or want further information, please contact either of the following:
- Jeff Gordon - RTD Chair, jeffrey.gordon@dot.gov; (617) 494-2303
- Sam Williams - Mgr. of Divisional Affairs, williams5759@gmail.com; (614) 799-1870
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