

May 27 10:00 AM – 12:00 PM

1 3 7 8

May 27 3:05 PM – 4:25 PM

1 2 5 8

May 27 1:30 PM – 2:50 PM

1 3 4 8

May 28 8:00 AM – 9:20 AM

1 5 7 2

May 28 11:10 AM – 12:30 PM

1 3 7 8

May 28 3:05 PM – 4:45 PM

1 4 7 8

May 28 9:35 AM – 10:55 AM

1 5 7 2

May 28 1:30 PM – 2:50 PM

1 4 7 8

Track	Topic	Speakers May 27	Speakers May 28	Total
Track 1	Railroad Track and Infrastructure	14	16	30
Track 2	Rolling Stock	4	8	12
Track 3	Motive Power, Energy, and Propulsion Systems	10	2	12
Track 4	Communication and Train Control	4	8	12
Track 5	Network, Operations, and Capacity	4	8	12
Track 7	Safety and Security	5	21	26
Track 8	Innovation and New Technologies	14	12	26

Tuesday, May 26, 2026 — Pre-Conference



7:30 AM – 9:00 PM

Registration Open Heritage Hall Lobby

8:30 AM – 8:45 AM

Plenary Session – FRA Administrator David A. Fink Opening Keynote

Heritage Hall 2/5

8:45 AM – 9:45 AM

Plenary Session – Future Rail Research Needs Panel Discussion

Karl Alexy (FRA) • Mike Baldwin (BRS) • Joey Rhine (NTSB) • Corey Pasta (MxV Rail)

Heritage Hall 2/5

9:45 AM – 10:00 AM

Break

Heritage Hall Lobby

Timeslot 1

10:00 AM

–

12:00 PM

15 min

presentations

5 min Q&A

1 3 7 8

HERITAGE HALL 3/6

Track 1 – Session A – Ballast

Comparative Evaluation of Capital and Spot Tamping Effectiveness through Track Geometry Deterioration Rates
University of Illinois Urbana-Champaign
Cayden Schroeder

10:00 AM

Developing Laboratory Test Data on Effects of Ballast Shoulder Width and Compaction Level of Tie Lateral Resistance
University of Hartford
Parth Patel

10:20 AM

Investigates the Effect of Freeze-Thaw Cycles on the Permanent Deformation Behavior of Railroad Ballast through Large-Scale Triaxial Cyclic Testing
University of South Carolina
Desi Tu

10:40 AM

Effects of Fouled Ballast on Track Responses Due to Excessive Rain
University of Delaware
Piero Caputo

11:00 AM

Automated 3D Railway Ballast Characterization with Field Validation
University of Illinois Urbana-Champaign
Kelin Ding

11:20 AM

Evaluation of New and Degraded Ballast Using an Innovative Bender Element Field Sensor and PANDA® Penetrometer
University of Illinois Urbana-Champaign
Hyunsoo Lee

11:40 AM

HONORS

Track 3 – Session A – Energy Modeling, Decarbonization, and System-Level Impacts

Harvesting Electrical Energy from Vibration of Railway Track using an Electromagnetic Energy Harvester with Circular Halbach Array
The University of Texas Rio Grande Valley
Adamaris Sanchez

10:00 AM

Quantifying Annual Industrial Locomotive Energy Consumption in the United States
National Laboratory of the Rockies
Alicia Birky

10:20 AM

Sensitivity of Simulated Energy Consumption to Railway Corridor Elevation Data Processing and Train Length
The University of Texas at Austin
Qianqian Tong

10:40 AM

Decarbonizing U.S. Intermodal Railyards through Evaluation of Energy System Scenarios: Partial Electrifications and Low-Carbon Fuels
University of Illinois Chicago
Brian Christian

11:00 AM

Quantifying Electrified Rail’s Indirect Exposure to the EU ETS: An Integrated Framework of Vision-based Metrology and Carbon Price Pass-through
China Jiliang University
Cunqian You

11:20 AM

Capped Aluminum Power Delivery Rail: A drop-In replacement for steel and steel-aluminum composite 3rd rail
Conductix-Wampfler Inc.
Keith Forman

11:40 AM

HERITAGE HALL 1

Track 7 – Session A – Application of Data Analytics on Grade Crossing Safety

Signal Optimization in Multimodal Corridors with Railroad-Highway Grade Crossings
Tennessee State University
Deo Chimba

10:00 AM

Traffic Tracking at Grade Crossings Using AI
The University of Texas Rio Grande Valley
Silvia Flores-Osuna

10:20 AM

Identifying Key Risk Factors for Railroad Crossing Crashes with Modern AI Models
Tennessee State University
Deo Chimba

10:40 AM

Artificial Intelligence Aided Monitoring System for Railroad Trespassing Mitigation
Rutgers University
John Ng

11:00 AM

Impact of Non-Motor Vehicle Traffic on Highway-Rail Grade Crossing Crash Predictions
University of Nebraska-Lincoln
Moomal Bukhari

11:20 AM

Efficacy of Four-Quadrant Gate Grade Crossing Warning Systems Compared to Conventional Two-Quad Gates
University of Illinois Urbana-Champaign
Derek Campbell

11:40 AM

HERITAGE HALL 4

Track 8 – Session A – Innovations in Rail Inspection and Signals

Advancements in LIDAR for Rail Applications
Hatch
Todd Ellis

10:00 AM

Laser Doppler Vibrometer-based Rail Defect Detection using Long Short-Term Memory Autoencoder
The University of Texas at Austin
Jinghang Weng

10:20 AM

Innovative Track Transition Monitoring System Using FBG Sensors: Field Validation for Rail Deflection and Load Measurement
Oklahoma State University
Mahsa Gharizadehvarnosefaderani

10:40 AM

Vision-Based UAV Navigation for Autonomous Railway Inspection
University of South Carolina
Toma Sucin

11:00 AM

System-Optimal Scheduling of Coupling and Decoupling for Battery-Powered Autonomous Freight Trains under Moving-Block Signaling
Sharma and Associates, Inc.
Sania E. Seilabi

11:20 AM

Application of AI-Based 3D Machine Vision for Enhanced Turnout Condition Monitoring
Pavemetrics Systems, Inc.
Antonio Mauricio

11:40 AM

12:00 PM – 1:30 PM

Lunch / Keynote Speaker – Kari Gonzales, President and CEO, MxV Rail
Fireside Chat – Patrick Whitehead, Executive Vice President and Chief Operating Officer, Canadian National Railway

Heritage Hall 2/5

Timeslot 2

1:30 PM
–
2:50 PM

15 min presentations
5 min Q&A
1 3 4 8

HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
Track 1 – Session B – Track Buckling/RNT I	Track 3 – Session B – Battery-Electric Trains, Charging, and Energy Storage	Track 4 – Session A – Railroad Radio Improvements	Track 8 – Session B – Innovations in Crossings and Operations
Implementing Finite Element Modeling to Simulate Longitudinal Resistance in Continuous Welded Rail The University of Texas Rio Grande Valley Jesus Amaro 1:30 PM	Evaluating Battery Electric Locomotive Energy Savings with Frequency Domain Analysis of Railway Corridor Grade Profiles The University of Texas at Austin Diwen Shi 1:30 PM	A Two-stage TDOA-based Algorithm for Locomotive Position Estimation in GNSS-denied Environments University of Calgary Teslim Lawal 1:30 PM	SMART-TWIN: An AI-Driven Digital Twin Framework for Real-Time Traffic Operations and Infrastructure Decision-Making California State University, Fresno Hovannes Kulhandjian 1:30 PM
Temperature Effect on Rail Anchor Longitudinal Resistance The University of Texas Rio Grande Valley David Vera 1:50 PM	Optimal Location of Wireless Charging Infrastructure for Battery-Electric Freight Trains: A Network Design Approach Sharma and Associates, Inc. Sania E. Seilabi 1:50 PM	UAV-Assisted 6G Communication Networks for Railways: Technologies, Applications, and Challenges National Yang Ming Chiao Tung University Aamer Mohamed Huroon 1:50 PM	The Facility for Accelerated Service Testing (FAST®): New Loop Design, Early Operations, and Results MxV Rail Dante DeVencynty 1:50 PM
Numerical Analysis of Rail Buckling Under Climate-Driven Temperature Extremes Oklahoma State University Mahtab Delfanzari 2:10 PM	Multi-Cell EIS Measurement System for State Diagnosis of Railway Vehicle Traction Battery Packs Korea National University of Transportation Seonwoong Kim 2:10 PM	Diffusion-Driven Channel Estimation for Robust Next-Generation High-Speed Railway Communication Networks Royal Melbourne Institute of Technology, Melbourne, Australia Kanwardeep Singh Gahlot 2:10 PM	Extracting and Analyzing Rail Crossing Behavior Signatures from Videos using Tensor Methods University of California Riverside Evangelos Papalexakis 2:10 PM
Nonlinear Displacement Controlled Computational Model for Predicting Buckling and Post-Buckling Response of Rail Structures Texas A&M University Ozant Ozumert Bulguoglu 2:30 PM	Evaluating Options for Electrifying Commuter Rail Diesel Multiple-Unit Vehicles on a Shortline Freight Corridor The University of Texas at Austin Heyang Zhang 2:30 PM	UWB Beacon-Receiver Based Indoor Ranging and Positioning System for GNSS-denied Environments University of Calgary Ying Xuan Cao 2:30 PM	Understanding Pedestrian Fatalities at Rail Crossings Through Machine Learning Analysis Auburn University Nsong Ernest Asiedu 2:30 PM

2:50 PM – 3:05 PM

**Break**

Heritage Hall Lobby

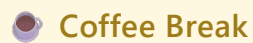
Timeslot 3

3:05 PM
–
4:25 PM

15 min presentations
5 min Q&A
1 2 5 8

HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
Track 1 – Session C – Track Buckling/RNT II	Track 2 – Session A – Bearings/Condition Monitoring	Track 5 – Session A – Operation of Shared Rail Corridors	Track 8 – Session C – Innovations in Bridges and Structures
Effects of Heating and Boundary Conditions on In-Situ Rail Neutral Temperature Estimates: A Parametric Investigation University of South Carolina Brennan Gedney 3:05 PM	Accelerometer Placement Effect on Measured Vibration Response of Freight Railcar Bearings The University of Texas Rio Grande Valley Joseph Montalvo 3:05 PM	Broward County Rail Jupiter Extension: A Case Study in Shared Freight, Commuter, and Intercity Service WSP Di Kang 3:05 PM	Autonomous Operation of Movable Rail Bridges WSP USA Miguel Estrella 3:05 PM
Analysis of Buckled-Track Derailments and Their Implications on Rail Neutral Temperature University of Illinois Urbana-Champaign Kamyar Kosarneshan 3:25 PM	A Comparative Study of Analog and Digital Accelerometers: Performance, Signal Integrity, and Application Suitability for the Rail Industry The University of Texas Rio Grande Valley Roberto Avila 3:25 PM	Simulating Changes in Shared Corridor Capacity Under Evolving Operating Practices The University of Texas at Austin Juliana Johnson 3:25 PM	Deployable Kirigami Truss Bridge: Design, Reduced Scale Experiment, and Simulation App Michigan Technological University Zhongqi Fan 3:25 PM
Development and Application of the Illinois Buckle Risk Model Using Multi-Source Track Data University of Illinois Urbana-Champaign Kaifeng Hu 3:45 PM	Feature Extraction from Railroad Bearing Onboard Vibration Sensors Using Machine Learning Models The University of Texas Rio Grande Valley Sergio Martinez 3:45 PM	Reducing Shared Corridor Heterogeneity through Alignment of Freight and Passenger Train Operating Plans and Characteristics Michigan Technological University Suphanat Juengprasertsak 3:45 PM	Fiberoptic Sensing for Improved Bridge Monitoring Modern Safety Engineering NA Christian Doeringer 3:45 PM
Further Developments Associated With Non-Contact in-Track Assessment of the State of Rail Stress University of Kansas Veeshal Modi 4:05 PM	Effects of Prolonged Inactivity on Railcar Bearing Performance The University of Texas Rio Grande Valley Constantine Tarawneh 4:05 PM	Optimizing In Railway Networks Using Reinforcement Learning Indian Institute of Technology Madras Isha Nayar 4:05 PM	Advanced Technology for the Identification of Stray Current Leakage for DC Powered Rail Systems Hatch Miqdaad Fatakdawala 4:05 PM

4:25 PM – 4:40 PM

**Coffee Break**

Heritage Hall Lobby

4:40 PM – 6:00 PM

**Poster Session**

Heritage Hall 2/5

6:00 PM – 9:00 PM

**Dinner**

Heritage Hall 2/5

7:30 AM – 4:45 PM

Registration Open Heritage Hall Lobby

Timeslot 4 8:00 AM – 9:20 AM 15 min presentations 5 min Q&A 1 5 7 2	HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session D – Track I	Track 5 – Session B – Future of Freight Rail Traffic	Track 7 – Session B – Grade Crossing Safety Improvement and Risk Mitigation	Track 2 – Session B – Condition Monitoring
	Quantifying Laboratory Investigation of the Influence of Tie and Fastener Type and Condition on Rail Torsional Resistance 8:00 AM University of Illinois Urbana-Champaign Kaifeng Hu	Freight Rail’s Role in Price Stability and Supply Chain Resilience 8:00 AM Association of American Railroads Jessica Shui	Operational Impacts of Variable Message Signs at Rail Crossings Adjacent to Signalized Intersections 8:00 AM Tennessee State University Deo Chimba	Feasibility Study on Low-Cost Monitoring of Train Abnormalities Using Rotor Frequency Information from Traction Motors 8:00 AM Railway Technical Research Institute Michihiro Yamashita
	A Probabilistic Risk Assessment Framework for Evaluating Track Geometry Inspection and Safety Performance 8:20 AM University of Houston Yanjie Yi	Encouraging Growth and Competition in an era of Mega-Mergers 8:20 AM Independent Rail Consultant Avery Grimes	A cognitive engineering approach to mapping cues to improve safety at highway rail grade crossings 8:20 AM Michigan Technological University Elizabeth Veinott	Locomotive Override: Recent Incidents Survey and Override Analysis Study 8:20 AM U.S. DOT Volpe National Transportation Systems Center Patricia Llana
	Enhancing Railway Track Monitoring with an Innovative Low-Power Wireless GNSS Displacement Meter 8:40 AM Worldsensing Andrea Bartoli	Rebalancing Modal Use for Freight Transport 8:40 AM North Carolina State University George List	Advancing Deakin RF Sensing for Enhancing Level Crossing Safety 8:40 AM Deakin University (Australia) Shiva Pokhrel	Electrical Scheme Diagnose: Case Study 8:40 AM Alstom Jean-francois Arnold
	Influence of Track Structure, Curvature, and Maximum Allowable Speed on Track Degradation Before and After Higher-Speed Rail Service Introduction 9:00 AM University of Illinois Urbana-Champaign Jose Gustavo Venancio da Silva Ramos	Can Merchandise Traffic be Saved? 9:00 AM Independent Rail Consultant Roger Baugher	Safety Implications of Motor Vehicle Wheelbase, Vertical Ground Clearance, and Vertical Profile of Highway Rail Grade Crossings in the United States 9:00 AM University of Illinois Urbana-Champaign Francesco Bedini Jacobini	Integrating Onboard/Wayside Sensor Fusion with PTC for Robust Foul Volume Object Detection 9:00 AM US DOT Federal Railroad Administration Sam Alibrahim

9:20 AM – 9:35 AM

Break
Heritage Hall Lobby

Timeslot 5 9:35 AM – 10:55 AM 15 min presentations 5 min Q&A 1 5 7 2	HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session E – Track II	Track 5 – Session C – Freight Mode Choice and Disruptive Technologies	Track 7 – Session C – Rail Security	Track 2 – Session C – Wheels/Railcar Load
	A Markov Decision Process Approach to Evaluating Under Tie Pads in Railroad Track Maintenance 9:35 AM University of Illinois Urbana-Champaign Jaeik Lee	Modeling Freight Mode Choice: A Multinomial Logit Approach with Empirical Calibration 9:35 AM North Carolina State University Md Abdullah Al Hasan	An Examination of the Intersection Between Cybersecurity and Safety: Using Security and Transport Protocols in Safety-Related Communications for Railway Applications 9:35 AM Hatch LTD Mansour Tabari	Development and Testing of an Onboard Load Sensor Embedded within Passive Steering Bearing Adapter Pads 9:35 AM The University of Texas Rio Grande Valley Diego Aguila/Aaron Blanton
	Mechanistic Evaluation of Track Modulus: Effect of Missing and Inadequately Supported Ties 9:55 AM Oklahoma State University Manouchehr Zeidiboghrabad	Integrated Modeling of Truck-to-Rail Opportunities on the Los Angeles–Chicago Corridor 9:55 AM Argonne National Laboratory Natalia Zuniga-Garcia	Decision Support System for Cyber-Resilient Railway Fallback Operations 9:55 AM University of Passau (Germany) Lóránt Meszlényi	Examining the Effects of Lateral Loading on Freight Tapered Roller Bearings 9:55 AM The University of Texas Rio Grande Valley Arturo Fuentes
	On the Reliability of a Physics-Informed Proxy for Track Stiffness Irregularities Detection Using InService Rail Vehicles 10:15 AM University of South Carolina Reza Naseri	Leveraging Autonomous, Battery-Electric Technology to Transform the Rail Industry 10:15 AM Intramotev / Washington University in St. Louis Timothy Luchini	Rail Security as a Big Data Problem: Analysis and Results 10:15 AM University of West Florida Jeremy Straub	Analysis of Wheelset Removal Trends 10:15 AM MxV Rail Corey Pasta
	Onboard Vibration-Based Railway Track Monitoring: Correlations and Differences between Axle Box Accelerometer and Laser Doppler Vibrometer 10:35 AM Delft University of Technology Yuanchen Zeng	Financing the Future of Freight: Exploring Innovations and Public Sector Investments in U.S. Rail Decarbonization 10:35 AM University of Illinois Chicago Brian Christian	From Surveillance Cameras to Intelligent Vision: A Review of AI and Image Processing Technologies for Crime Prevention in Rail Public Transportation 10:35 AM University of Illinois Chicago Ali Mohammadi	An Integrated Analysis of Freight Rail Wheel Performance: Effects of Crack Geometry, Load Position, and Braking Conditions 10:35 AM ENSCO Inc. Mohamad Ghodrati


10:55 AM – 11:10 AM

Break
Heritage Hall Lobby

Timeslot 6 11:10 AM – 12:30 PM 15 min presentations 5 min Q&A 1 3 7 8	HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session F – Concrete Ties	Track 3 – Session C – Traction Power Electronics, Thermal Management, and Control	Track 7 – Session D – Analytical and Simulation-Based Methods for Rail Safety	Track 8 – Session D – Innovations in Track and Ballast
	Crosstie Flexural Capacity Comparison 11:10 AM Kansas State University Christopher Jones	Critical Improvements in Thermal Materials and Characterization Tools for Propulsion System Power Semiconductors 11:10 AM DS&A LLC Dave Saums	Numerical modelling and evaluation of different track-mounted derailment mitigation measures 11:10 AM Politecnico di Milano Matteo Santelia	A Framework for Full Network Coverage of Track Stability Monitoring 11:10 AM University of South Carolina Brennan Gedney
	Concrete Tie Corrosion Susceptibility 11:30 AM Kansas State University Christopher Jones	Innovative Liquid Cooling Hardware Improvements for Propulsion System Power Semiconductors 11:30 AM DS&A LLC Dave Saums	Development of Simulation Model for Shielding of Internal Components of Railcar Against Shrapnel in the Explosion Incidents 11:30 AM ENSCO Inc. Przemyslaw Rakoczy	Scalable Estimation of Degrees of Curvature and Grades for the U.S. Freight Rail Network Using Open-Source GIS Data 11:30 AM North Carolina State University Md Abdullah Al Hasan
	Evaluation of Prestressed Concrete Railroad Ties Under Cyclic and Impulse Loading 11:50 AM Kansas State University Hunter Meier	Modeling and Control of Traction Systems for Urban Electric Train 11:50 AM Hanoi University of Science and Technology Thinh Mai Xuan	Evaluating the Effects of Car Length on Train Derailment Severity 11:50 AM University of Illinois Urbana-Champaign Andrew Hohe	Enhancing Railway Track Lateral Resistance using Bending-induced Architected Instability-based Metamaterials 11:50 AM The University of Texas at Austin Sibo Zhang
Freeze-Thaw Testing of Five Different Prestressed Concrete Tie Designs Spanning 50 Years of Production 12:10 PM Kansas State University Hunter Meier	Performance Evaluation of Field-Oriented Control for Electric Train Traction Driven by Multiple Induction Motors 12:10 PM Hanoi University of Science and Technology Thinh Mai Xuan	Probability of Tank Car Damage and Release for Specific Derailment Conditions 12:10 PM University of Illinois Urbana-Champaign Paul Gharzouzi	Predicting Track Gauge Deterioration with a Self-Attention Transformer and RFID-Assisted Alignment 12:10 PM Rutgers University Mulin Wan	

 **Lunch**
 Heritage Hall 2/5

Timeslot 7 1:30 PM – 2:50 PM 15 min presentations 5 min Q&A 1 4 7 8	HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session G – Rail I	Track 4 – Session B – Advancements in Train Control and Signaling for Urban Railroad	Track 7 – Session E – Innovative Solutions for Rail Safety Improvement	Track 8 – Session E – Innovations in Safety and Technology
	Predicting Rail Break Gap Sizes in Sub-Freezing Temperatures Leveraging a Laboratory and Finite Element Study 1:30 PM University of Illinois Urbana-Champaign Kamyar Kosarneshan	The Long Track to Modernization: New York City Subway Train Control 1:30 PM MTA C&D New York Gregoire Sulmont	A Novel Autonomous Platform Barrier System 1:30 PM Rail Baltic Estonia Even Sekhri	Predictive Condition Monitoring of Freight Rail Bearings: A Vibration-Based Machine Learning Approach 1:30 PM The University of Texas Rio Grande Valley Elian Cantu
	Multiscale Modeling of Seasonal Thermal Mechanical Effects on Subsurface Crack Growth in Rails 1:50 PM Texas A&M University Sina Saberi	Automation of Urban Railway - A Retrospective Analysis and Look Into the Future of Rail Transport 1:50 PM University of Dresden Sven Scholz	Enhancing Safety Through A New Railway Wheel Design 1:50 PM MRS Logistica SA Claudio Buchholz	Subsurface Crack Characterization in Rail via Contrast Enhanced Ultrafast Ultrasound Imaging 1:50 PM Michigan Technological University Hinga Roseline Raliba
	A Physics-Informed Risk Assessment Framework for Modeling Rail Failure Risk from Transverse Defects 2:10 PM University of Houston Yanjie Yi	C-Rail: Expanding the C-ITS Ecosystem to Trams and Trains 2:10 PM Robert Bosch GmbH, Bosch Engineering GmbH Nico Ostendorf	Safety of Railway Vehicles under Non-Synoptic Crosswind Conditions 2:10 PM Politecnico di Milano Carlos Esteban Araya Reyes	Crashworthiness of Emerging Rail Technology Equipment: Scenarios of Concern 2:10 PM U.S. DOT Volpe National Transportation Systems Center Karina Jacobsen
Microstructure - Fracture Behavior Relationship of Thermite Weld Repairs 2:30 PM Tuskegee University Heshmat Aglan	SeRStep Based Novel Approach for Sensitivity Analysis of CBTC Safe Braking Model 2:30 PM WSP USA Pankaj Dhakate	Keeping Safety On Track: Improving Safety for Short Line and Regional Railroads 2:30 PM Short Line Safety Institute Julia Leone	Industrial Networks SMRTag™ System 2:30 PM Industrial Networks Claire Daniels	

 **Break**
 Heritage Hall Lobby

Timeslot 8**3:05 PM**

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4:45 PM**15 min presentations****5 min Q&A****1 4 7 8**

HERITAGE HALL 3/6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
Track 1 – Session H – Rail II	Track 4 – Session C – Safety and Security for Train Control Systems	Track 7 – Session F – Data-Driven Risk Assessments for Rail Infrastructure and Operations	Track 8 – Session F – Innovations in Rolling Stock
Failure Analysis of Thermite Weld Rails Under Reverse Slow Bend Test 3:05 PM Tuskegee University Heshmat Aglan	Real-Time Eco-driving in regional trains with ERTMS signaling system 3:05 PM University of Salerno Vincenzo Galdi	Data-Driven Risk-Based Modeling of Manual Walking Inspection Frequency 3:05 PM University of Delaware Manisha Kandel	Integration of Solar Energy Harvesting on Wireless Onboard Condition Monitoring Systems for Long-Term Power Sustainability 3:05 PM The University of Texas Rio Grande Valley Richard Palacios Jr.
A Dynamic Finite Element Approach to Simulate Single Rail Breaks in Continuous Welded Rail 3:25 PM University of Illinois Urbana-Champaign Kamyar Kosarneshan	Intelligent Traffic Signal Control at Railway Crossing Based on Train-Induced Blockage Information 3:25 PM University of South Carolina Ning Ding	Development of a Risk Based Track Geometry Inspection Model for Optimizing Inspection Intervals 3:25 PM University of Delaware Johnson Chukwu	Enhancing Safety in LNG Rail Transport: A Risk-Based Decision Support Framework 3:25 PM Morgan State University Nicole Anderson
Fatigue Crack Modeling in Railheads: Material Characterization and Simulation of Varying Flaws 3:45 PM Texas A&M University Hesam Mortazavi	A Survey of Security Vulnerabilities and Solutions for Railway Wireless Communications 3:45 PM Queen's University (Canada) Mackenzie Tummers	Temporal Trends in the Geospatial Location and Nearby Railroad Track Topography of Freight Train Handling Derailments 3:45 PM The University of Texas at Austin Matthew J Friar	Risks of Overly Rapid Commercialization of New Locomotive Designs & Technologies 3:45 PM Tier 5 Locomotive LLC Michael Iden
A Finite Element Investigation of Microstructural Effects on Fatigue Crack Propagation in Rail Steel 4:05 PM Texas A&M University Bulent Altay	SAFE-T: Secure Authentication Framework for End-of-Train Communications 4:05 PM University of Illinois Urbana-Champaign Richard Liu	Statistical Modeling of Distributed Power, Train Length, and Derailment Rate 4:05 PM University of Illinois Urbana-Champaign Xinhao Liu	Machine Learning-Based Estimation of Train Energy Consumption 4:05 PM Scuola Superiore Sant'Anna Domenico Uomo
Ultrasonic Rail Inspection: A Pillar of Heavy Haul Railway Safety 4:25 PM MRS Logistics Marcos Paulo Eudoxio		Technical Systems Integration Risk Mitigation Using a Systems Engineering Approach for Civil Infrastructure Projects in Multi-Package Rail & Transit Programs 4:25 PM WSP Canada Inc. Janarthan Vedantham	