

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

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May 28 9:35 AM – 10:55 AM

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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

	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
 Registration Open (Heritage Hall Lobby)	12:00 PM–8:30 PM									
Exhibit Hall – Set Up		1:00 PM–9:00 PM								
Meeting Space Available (Heritage Hall 1)		1:00 PM–2:45 PM								
Meeting Space Available (Heritage Hall 4)		1:00 PM–2:45 PM								
Meeting Space Available (Honors)		1:00 PM–2:45 PM								
 Break – Heritage Hall Lobby										
Beyond Detection: Combining Wayside Systems Predictive Monitoring and Human Oversight to Prevent Derailments – Workshop (Heritage Hall 1)				3:00 PM–4:45 PM						
NURail CoE Meeting (Heritage Hall 4)					3:30 PM–5:30 PM					
Meeting Space Available (Honors)					3:30 PM–5:30 PM					
UTCRS Meeting (Invitation Only) (Heritage Hall 1)						5:00 PM–6:00 PM				
Opening Reception – Welcome Remarks by Rashid Bashir Dean of the Grainger College of Engineering (Heritage Hall 2/5)							6:00 PM–8:30 PM			

7:30 AM – 8:30 PM		 Registration Open Heritage Hall Lobby		
8:20 AM – 8:25 AM		 Welcome from the Conference Chair – Yousef Kimiagar Heritage Hall 2/5		
8:25 AM – 8:30 AM		 Welcome by VTS President – Prof. Dr.-Ing. Gerhard Bauch Heritage Hall 2/5		
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 – <u>Future Rail Research Needs</u> Panel Discussion Karl Alexy (FRA) • Mike Baldwin (BRS) • Joey Rhine (NTSB) • Corey Pasta (MxV Rail) Moderator: Constantine Tarawneh 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 6 Track 1 – Session A – Ballast Session Chair: Dimitris Rizos	HONORS Track 3 – Session A – Energy Modeling, Decarbonization, and System-Level Impacts Session Chair: Joseph Montalvo	HERITAGE HALL 1 Track 7 – Session A – Application of Data Analytics on Grade Crossing Safety Session Chair: Xiang Liu	HERITAGE HALL 4 Track 8 – Session A – Innovations in Rail Inspection and Signals Session Chair: Jinghao Yang
	Comparative Evaluation of Capital and Spot Tamping Effectiveness through Track Geometry Deterioration Rates University of Illinois Urbana-Champaign Cayden Schroeder 10:00 AM	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	Signal Optimization in Multimodal Corridors with Railroad-Highway Grade Crossings Tennessee State University Deo Chimba 10:00 AM	Advancements in LIDAR for Rail Applications Hatch Todd Ellis 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	Quantifying Annual Industrial Locomotive Energy Consumption in the United States National Laboratory of the Rockies Alicia Birky 10:20 AM	Traffic Tracking at Grade Crossings Using AI The University of Texas Rio Grande Valley Silvia Flores-Osuna 10:20 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
	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	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	Identifying Key Risk Factors for Railroad Crossing Crashes with Modern AI Models Tennessee State University Deo Chimba 10:40 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
	Effects of Fouled Ballast on Track Responses Due to Excessive Rain University of Delaware Piero Caputo 11:00 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	Artificial Intelligence Aided Monitoring System for Railroad Trespassing Mitigation Rutgers University John Ng 11:00 AM	Vision-Based UAV Navigation for Autonomous Railway Inspection University of South Carolina Toma Sucin 11:00 AM
	Automated 3D Railway Ballast Characterization with Field Validation University of Illinois Urbana-Champaign Kelin Ding 11:20 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	Impact of Non-Motor Vehicle Traffic on Highway-Rail Grade Crossing Crash Predictions University of Nebraska-Lincoln Moomal Bukhari 11:20 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
	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	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	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	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 6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session B – Track Buckling/RNT I Session Chair: Dimitris Rizos	Track 3 – Session B – Battery-Electric Trains, Charging, and Energy Storage Session Chair: Michael Iden	Track 4 – Session A – Railroad Radio Improvements Session Chair: Lamont Ward	Track 8 – Session B – Innovations in Crossings and Operations Session Chair: G. Avery Grimes
	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 DeVcenty 1:50 PM
	Numerical Analysis of Rail Buckling Under Climate-Driven Temperature Extremes Oklahoma State University Mahtab Delfanazari 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 Manisha Kandel on behalf of Kanwardeep Singh Gahlot 2:10 PM	Extracting and Analyzing Rail Crossing Behavior Signatures from Videos using Tensor Methods University of California Riverside Het Patel 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 6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session C – Track Buckling/RNT II Session Chair: Gasser Ali	Track 2 – Session A – Bearings/Condition Monitoring Session Chair: Constantine Tarawneh	Track 5 – Session A – Operation of Shared Rail Corridors Session Chair: Tyler Dick	Track 8 – Session C – Innovations in Bridges and Structures Session Chair: Eric Fitzsimmons
	Effects of Heating and Boundary Conditions on In-Situ Rail Neutral Temperature Estimates: A Parametric Investigation University of South Carolina Nicholas Cunningham 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 3

6:00 PM – 9:00 PM

 Dinner and Award Ceremony

Heritage Hall 2/5

7:30 AM – 12:00 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 6				HONORS				HERITAGE HALL 1				HERITAGE HALL 4						
	Track 1 – Session D – Track I Session Chair: Reza Naseri				Track 5 – Session B – Future of Freight Rail Traffic Session Chair: Tyler Dick				Track 7 – Session B – Grade Crossing Safety Improvement and Risk Mitigation Session Chair: Gasser Ali				Track 2 – Session B – Condition Monitoring Session Chair: Constantine Tarawneh						
	Quantifying Laboratory Investigation of the Influence of Tie and Fastener Type and Condition on Rail Torsional Resistance University of Illinois Urbana-Champaign Kaifeng Hu				Freight Rail’s Role in Price Stability and Supply Chain Resilience Association of American Railroads Jessica Shui				Operational Impacts of Variable Message Signs at Rail Crossings Adjacent to Signalized Intersections Tennessee State University Deo Chimba				Feasibility Study on Low-Cost Monitoring of Train Abnormalities Using Rotor Frequency Information from Traction Motors Railway Technical Research Institute Michihiro Yamashita						
	A Probabilistic Risk Assessment Framework for Evaluating Track Geometry Inspection and Safety Performance University of Houston Yanjie Yi				Encouraging Growth and Competition in an era of Mega-Mergers Independent Rail Consultant Avery Grimes				A cognitive engineering approach to mapping cues to improve safety at highway rail grade crossings Michigan Technological University Elizabeth Veinott				Locomotive Override: Recent Incidents Survey and Override Analysis Study U.S. DOT Volpe National Transportation Systems Center Patricia Llana						
	Enhancing Railway Track Monitoring with an Innovative Low-Power Wireless GNSS Displacement Meter Worldsensing Nathan McGee				Rebalancing Modal Use for Freight Transport North Carolina State University George List				Advancing Deakin RF Sensing for Enhancing Level Crossing Safety Deakin University (Australia) Manisha Kandel on behalf of Shiva Pokhrel				Electrical Scheme Diagnose: Case Study Alstom Jean-francois Arnold						
	Influence of Track Structure, Curvature, and Maximum Allowable Speed on Track Degradation Before and After Higher-Speed Rail Service Introduction University of Illinois Urbana-Champaign Jose Gustavo Venancio da Silva Ramos				Can Merchandise Traffic be Saved? 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 University of Illinois Urbana-Champaign Francesco Bedini Jacobini				Integrating Onboard/Wayside Sensor Fusion with PTC for Robust Foul Volume Object Detection 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 6				HONORS				HERITAGE HALL 1				HERITAGE HALL 4						
	Track 1 – Session E – Track II Session Chair: Brennan Gedney				Track 5 – Session C – Freight Mode Choice and Disruptive Technologies Session Chair: Tyler Dick				Track 7 – Session C – Rail Security Session Chair: Sam Alibrahim				Track 2 – Session C – Wheels/Railcar Load Session Chair: Constantine Tarawneh						
	A Markov Decision Process Approach to Evaluating Under Tie Pads in Railroad Track Maintenance University of Illinois Urbana-Champaign Jaeik Lee				Modeling Freight Mode Choice: A Multinomial Logit Approach with Empirical Calibration 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 Hatch LTD Mansour Tabari				Development and Testing of an Onboard Load Sensor Embedded within Passive Steering Bearing Adapter Pads The University of Texas Rio Grande Valley Diego Aguila/Aaron Blanton						
	Mechanistic Evaluation of Track Modulus: Effect of Missing and Inadequately Supported Ties Oklahoma State University Manouchehr Zeidiboghrabad				Integrated Modeling of Truck-to-Rail Opportunities on the Los Angeles–Chicago Corridor Argonne National Laboratory Natalia Zuniga-Garcia				Decision Support System for Cyber-Resilient Railway Fallback Operations University of Passau (Germany) Lóránt Meszlényi				Examining the Effects of Lateral Loading on Freight Tapered Roller Bearings 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 University of South Carolina Reza Naseri				Leveraging Autonomous, Battery-Electric Technology to Transform the Rail Industry Intramotev / Washington University in St. Louis Timothy Luchini				Rail Security as a Big Data Problem: Analysis and Results University of West Florida Jeremy Straub				Analysis of Wheelset Removal Trends MxV Rail Corey Pasta						
	Onboard Vibration-Based Railway Track Monitoring: Correlations and Differences between Axle Box Accelerometer and Laser Doppler Vibrometer Delft University of Technology Yuanchen Zeng				Financing the Future of Freight: Exploring Innovations and Public Sector Investments in U.S. Rail Decarbonization 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 University of Illinois Chicago Ali Mohammadi				An Integrated Analysis of Freight Rail Wheel Performance: Effects of Crack Geometry, Load Position, and Braking Conditions 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 6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session F – Concrete Ties Session Chair: Dimitris Rizos	Track 3 – Session C – Traction Power Electronics, Thermal Management, and Control Session Chair: Michael Iden	Track 7 – Session D – Analytical and Simulation-Based Methods for Rail Safety Session Chair: Chris Barkan	Track 8 – Session D – Innovations in Track and Ballast Session Chair: Mustapha Rahmaninezhad
	Crosstie Flexural Capacity Comparison Kansas State University Christopher Jones 11:10 AM	Critical Improvements in Thermal Materials and Characterization Tools for Propulsion System Power Semiconductors DS&A LLC Dave Saums 11:10 AM	Numerical modelling and evaluation of different track-mounted derailment mitigation measures Politecnico di Milano Matteo Santelia 11:10 AM	A Framework for Full Network Coverage of Track Stability Monitoring University of South Carolina Brennan Gedney 11:10 AM
	Concrete Tie Corrosion Susceptibility Kansas State University Christopher Jones 11:30 AM	Innovative Liquid Cooling Hardware Improvements for Propulsion System Power Semiconductors DS&A LLC Dave Saums 11:30 AM	Development of Simulation Model for Shielding of Internal Components of Railcar Against Shrapnel in the Explosion Incidents ENSCO Inc. Przemyslaw Rakoczy 11:30 AM	Scalable Estimation of Degrees of Curvature and Grades for the U.S. Freight Rail Network Using Open-Source GIS Data North Carolina State University Md Abdullah Al Hasan 11:30 AM
	Evaluation of Prestressed Concrete Railroad Ties Under Cyclic and Impulse Loading Kansas State University Hunter Meier 11:50 AM	Modeling and Control of Traction Systems for Urban Electric Train Hanoi University of Science and Technology Thinh Mai Xuan 11:50 AM	Probability of Tank Car Damage and Release for Specific Derailment Conditions Applied Research Associates Steven Kirkpatrick 11:50 AM	Enhancing Railway Track Lateral Resistance using Bending-induced Architected Instability-based Metamaterials The University of Texas at Austin Sibo Zhang 11:50 AM
	Freeze-Thaw Testing of Five Different Prestressed Concrete Tie Designs Spanning 50 Years of Production Kansas State University Hunter Meier 12:10 PM	Performance Evaluation of Field-Oriented Control for Electric Train Traction Driven by Multiple Induction Motors Hanoi University of Science and Technology Thinh Mai Xuan 12:10 PM		Predicting Track Gauge Deterioration with a Self-Attention Transformer and RFID-Assisted Alignment Rutgers University Mulin Wan 12:10 PM

12:30 PM – 1:30 PM

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

2:50 PM – 3:05 PM

Break

Heritage Hall Lobby

Timeslot 8 3:05 PM – 4:45 PM 15 min presentations 5 min Q&A 1 4 7 8	HERITAGE HALL 6	HONORS	HERITAGE HALL 1	HERITAGE HALL 4
	Track 1 – Session H – Rail II Session Chair: Brennan Gedney	Track 4 – Session C – Safety and Security for Train Control Systems Session Chair: Jinghao Yang	Track 7 – Session F – Data-Driven Risk Assessments for Rail Infrastructure and Operations Session Chair: Francesco Bedini	Track 8 – Session F – Innovations in Rolling Stock Session Chair: Sergio Martinez
	Failure Analysis of Thermite Weld Rails Under Reverse Slow Bend Test Tuskegee University Heshmat Aglan 3:05 PM	Real-Time Eco-driving in regional trains with ERTMS signaling system University of Salerno Vincenzo Galdi 3:05 PM	Data-Driven Risk-Based Modeling of Manual Walking Inspection Frequency University of Delaware Manisha Kandel 3:05 PM	Integration of Solar Energy Harvesting on Wireless Onboard Condition Monitoring Systems for Long-Term Power Sustainability The University of Texas Rio Grande Valley Richard Palacios Jr. 3:05 PM
	A Dynamic Finite Element Approach to Simulate Single Rail Breaks in Continuous Welded Rail University of Illinois Urbana-Champaign Kamyar Kosarneshan 3:25 PM	Intelligent Traffic Signal Control at Railway Crossing Based on Train-Induced Blockage Information University of South Carolina Ning Ding 3:25 PM	Development of a Risk Based Track Geometry Inspection Model for Optimizing Inspection Intervals University of Delaware Johnson Chukwu 3:25 PM	Enhancing Safety in LNG Rail Transport: A Risk-Based Decision Support Framework Morgan State University Nicole Anderson 3:25 PM
	Fatigue Crack Modeling in Railheads: Material Characterization and Simulation of Varying Flaws Texas A&M University Hesam Mortazavi 3:45 PM	A Survey of Security Vulnerabilities and Solutions for Railway Wireless Communications Queen's University (Canada) Mackenzie Tummers 3:45 PM	Temporal Trends in the Geospatial Location and Nearby Railroad Track Topography of Freight Train Handling Derailments The University of Texas at Austin Matthew J Friar 3:45 PM	Risks of Overly Rapid Commercialization of New Locomotive Designs & Technologies Tier 5 Locomotive LLC Michael Iden 3:45 PM
	A Finite Element Investigation of Microstructural Effects on Fatigue Crack Propagation in Rail Steel Texas A&M University Bulent Altay 4:05 PM	SAFE-T: Secure Authentication Framework for End-of-Train Communications University of Illinois Urbana-Champaign Richard Liu 4:05 PM	Statistical Modeling of Distributed Power, Train Length, and Derailment Rate University of Illinois Urbana-Champaign Xinhao Liu 4:05 PM	Machine Learning-Based Estimation of Train Energy Consumption Scuola Superiore Sant'Anna Domenico Uomo 4:05 PM
	Ultrasonic Rail Inspection: A Pillar of Heavy Haul Railway Safety MRS Logistics Marcos Paulo Eudoxio 4:25 PM		Technical Systems Integration Risk Mitigation Using a Systems Engineering Approach for Civil Infrastructure Projects in Multi-Package Rail & Transit Programs WSP Canada Inc. Janarthan Vedantham 4:25 PM	