

AREMA 2018

ANNUAL CONFERENCE & EXPOSITION

Record of Professional Development Hours

Please enter the amount of PDH credits earned for each session in the **PDH Earned** column. The total PDH credits earned for the 2018 Annual Conference will be shown at bottom.

FORM SUBMITTAL DEADLINE – OCTOBER 1, 2018

PLEASE NOTE: FORM MUST BE RECEIVED BY THE DEADLINE OR IT WILL NOT BE PROCESSED. THANK YOU.

Time	Session Description	PDH Credit	PDH Earned
Monday September 17, 2018			
10:00 am	Engineering Services Presentation Virginia Avenue Tunnel Reconstruction Project		
10:30 am	Communications & Signals Presentation Cyber Security Risk Management of Connected Railroads: A Literature Review		
11:00 am	Track Presentation Heavy Axle Load Research and Development at TTCI: An Update on the Performance of Next Generation Wheels, Rails, and Welds		
11:30 am	Structures Presentation Design and Construction of the New Portageville Railroad Bridge		
12:00 pm	Passenger & Transit Presentation Sound Transit's Tacoma Trestle Track & Signal Project – A Winding Bridge to a Successful Project		
12:30 pm	Maintenance-of-Way Presentation Operation under Fouled Ballast Waiver		
TOTAL for Monday General Session		3.0	

Tuesday | September 18, 2018

Technical Session: Communications & Signals

8:00 am	Analysis of Restricted Speed Accidents and Potential Implementations of Positive Train Control Systems		
8:30 am	How Do Drivers Behave at Highway-Rail Grade Crossings – Comparison of Data from Actual and Virtual Environments		
9:00 am	PTC Interoperability Third Party Integrator		
9:30 am	Communication Based Train Control System (CBTC)		
10:30 am	Developing a Fail-Safe Train Control System - A Canadian Perspective		

- 11:00 am NICTD Positive Train Control Project
- 11:30 am Reducing Road Crossing Collisions
- 2:00 pm Design of Grade Crossing Warning Systems for Electrified Environments
- 2:30 pm 90-GHz Band Radiocommunication System for High Speed Train

TOTAL for Communications & Signals Technical Session 4.5

Tuesday | September 18, 2018

Technical Session: Engineering Services

- 8:00 am South Florida Regional Transportation Authority: Implementation of Corridor Occupancy Permitting on the South Florida Rail Corridor
- 8:30 am Managing Geotechnical Risk in Railroad Design and Construction
- 9:00 am STEM Outreach to K-12 Students: The Root of Railway Engineering Education
- 9:30 am Port Houston Bayport Container Terminal, Ready for Today, Planning for Tomorrow
- 10:30 am Sustainable Yard Conversions Considering Operations and Engineering (60 Minute Panel)
- 11:30 am Taking a New Bulk Product to Market: Using a Transportation Planning Study to Make Informed Business Decisions
- 2:00 pm Capacity Expansion of Kansas City Southern Railway in Mexico
- 2:30 pm Introduction to Virtual Reality for the Rail Industry
- 3:00 pm BNSF Alliance Intermodal Facility Expansion: A Large-scale Project at a Critical System Facility
- 3:30 pm Norfolk Southern's Simpson Yard Intermodal Expansion: Expanding an Existing Facility in a Constrained Footprint

TOTAL for Engineering Services Technical Session 5.5

Technical Session: Maintenance-of-Way

- 8:00 am From Concept to Reality Combining a Rockfall Barrier with a Retaining Wall to Protect Railway Tracks
- 8:30 am Concentrated Boron Rod Diffusion in White and Red Oak Bridge Ties
- 9:00 am Surgical Automated Tie Replacement Marketing
- 9:30 am On Track Welding Robot Creates a Lifelong Connection
- 10:30 am Resiliency in Planning for Large Capital Rail Projects
- 11:00 am Data Driven Pavements

- 11:30 am Machine Learning for Maintenance Inspections
- 2:00 pm Quantifying Rail Surface Damage Using Machine Vision
- 2:30 pm Modelling the Effect of Sleeper Distance on Wayside Measurement of Wheel-rail Lateral Contact Force
- 3:00 pm Permeation Grouting Keep Norfolk Southern on Track at Goshen
- 3:30 pm Versatility and Value of Automated Track Inspection Data on Norfolk Southern

TOTAL for Maintenance-of-Way Technical Session 5.5

Technical Session: Passenger & Transit

- 8:00 am AMTRAK Speed Improvement
- 8:30 am Joliet Interlocker Reconstruction
- 9:00 am Navigating the FRA and STB NEPA Process the Easy Way
- 9:30 am Washington Wabash Elevated Train Station
- 10:30 am Chicago Union Station – Low-level Platform Design Considerations
- 11:00 am Challenges in Commuting (60 Minute Panel)
- 2:00 pm Chicago – St. Louis High Speed Rail Program Update
- 2:30 pm Going Off Wire: An Introduction to Off Wire Applications Due to Emerging Technology for Transit Systems

TOTAL for Passenger & Transit Technical Session 5

Technical Session: Structures

- 8:00 am Field Measurements Support Lower Live Load Impact Factors for Direct Fixation Bridges
- 8:30 am Emergency Strauss Bascule Link Pin Repair – Seabrook Bascule Bridge
- 9:00 am US 190 Mississippi River Bridge, A Combined Railroad/Highway Bridge Rehabilitation
- 9:30 am Freezing of a Worn Pin Joint in a Pin Connected Warren Through Truss Incorporating Hair Pins and Compression Struts
- 10:30 am A Tale of 3 Bridges
- 11:00 am Construction Monitoring – Past, Present, and Future
- 11:30 am Fatigue Life Estimation for Deck Plat Girder Bridge Spans
- 2:00 pm Design and Launching of Three Truss Bridge Spans over BNSF Northtown Rail Yard
- 2:30 pm Drainage and Icing Improvements in Aging Railroad Tunnels

- 3:00 pm New CSX Bridge – Deep Foundation Installation in Karst Bedrock
- 3:30 pm Collaboration During Construction and Innovative Retaining Wall Design: BNSF Kelso Martin’s Bluff

TOTAL for Structures Technical Session 5.5

Technical Session: Track

- 8:00 am Flange Bearing Frog Testing to Evaluate the Effects of Train Speed, Ramp Shape, and Frog Foundations
- 8:30 am The Development of Manganese Steel Laster Additive Manufacturing as a Means of Special Trackwork Repair
- 9:00 am Development and Application of a Next Generation Rail Wear Model
- 9:30 am Big-Data-Aided Rail Defect Risk Prediction Using Machine Learning Algorithms
- 10:30 am Benefits of Using a New High Strength Reduced Modulus Concrete in Prestressed Concrete Railroad Ties
- 11:00 am Optimization of Concrete Crosstie Design for Amtrak’s Northeast Corridor (NEC) Operating Environment
- 11:30 am Implementing Improved Composite Tie Design and Testing Guidelines into the AREMA Manual for Railway Engineering
- 2:00 pm Principles of Degraded Ballast and Their Track Safety Implications
- 2:30 pm Ground Penetrating Radar (GPR) Technology Evaluation and Implementation on an FRA Research Car
- 3:00 pm Track Support Floating Soil Beam on Helical Piles – Canadian National Railway Bala Subdivision Aurora, Ontario
- 3:30 pm Flexible Design in Mitigation of Natural Rock Slopes
- 4:00 pm Rock Slope Stabilization on an Active Commuter Line

TOTAL for Track Technical Session 6

Wednesday | September 19, 2018

- 8:45 am **Passenger & Transit Presentation**
Passenger Platforms and Freight Railroads: A Summary of Research and Analysis of Station Design and Code Requirements for Life Safety in the Railroad Operating Environment
- 9:15 am **Maintenance-of-Way Presentation**
Relationship between Track Geometry Degradation and Subsurface Condition as Measured by GPR
- 9:45 am **Engineering Services Presentation**
Asset Care Analytics: Predictive Condition Based Track Asset Management Planning Using Track Geometry and Rail Wear Condition Data
- 10:45 am **Track Presentation**
Union Pacific’s Brazos River Bank Stabilization Project
- 11:15 am **Communications & Signals Presentation**
Wayside Health Monitoring System
- 11:45 am **Structures Presentation**
The New Sarah Long Bridge

TOTAL PDH Credits Earned

PLEASE NOTE: YOU MAY ONLY SUBMIT CREDIT FOR ONE FULL TECHNICAL SESSION ON TUESDAY. YOU CANNOT SPLIT TUESDAY CREDIT HOURS.

Return this form to AREMA via email (meetings@arema.org). Your PDF Certificate will be mailed to you after the deadline. For questions regarding this form, please contact Desirée Knight at dknight@arema.org.

Full Name		Member ID	
Title			
Organization			
Address			
City	State/Province	Country	Postal Code
Phone	Fax	E-Mail Address	
<input type="radio"/> I certify that I attended the Sessions indicated above.			
Signature		Date	

FORM SUBMITTAL DEADLINE – OCTOBER 1, 2018

PLEASE NOTE: FORM MUST BE RECEIVED BY THE DEADLINE OR IT WILL NOT BE PROCESSED. THANK YOU.



American Railway Engineering and Maintenance-of-Way Association
4501 Forbes Blvd, Suite 130, Lanham, MD 20706-4326
Tel: 301-459-3200 / Fax: 301-459-8077