Register Now: Don’t miss these exciting speakers and technical tours associated with the Joint Rail Conference. To register for the 2017 Joint Rail conference, go to https://www.asme.org/events/joint-rail-conference.

Luncheon speaker
Jeffrey D. Knueppel, P.E. General Manager
Southeastern Pennsylvania Transportation Authority
“The Rebirth of SEPTA’s Media/Elwyn Line. Projects Underway and Completed to Restore the Poster Child of SEPTA’s Infrastructure Backlog to a Resilient State of Good Repair.”

JRC2017 Banquet and Keynote Speaker:
Andrew Wood, Executive Project Director, Amtrak’s Tier III Project Management Office

“Amtrak’s Program to Acquire New Tier III-Compliant High Speed Trainsets to Replace the Existing Acela Fleet.”

Andrew Wood is the Executive Project Director, Tier III Next Generation Trainsets Project Office in the NEC Business Development Group in Philadelphia. He led the team that developed the NEC Finance and Business Plan in the 2012 Vision Update having joined Amtrak as Assistant Vice President – High Speed Rail in 2011. Previously as Deputy Director Rail with Washington State DOT, his team was successful in gaining an $800 million ARRA award for Amtrak Cascades Service. Andrew joined British Rail from college, was an Operations Management Trainee and progressed through many operational management positions which included area management, regional management and board headquarters. Andrew has worked in eighteen countries around the world, has a BA in Mathematics, qualified as a Fellow of the Chartered Institute of Logistics and Transport, a Project Management Professional (PMP) and is a Life Fellow of the Royal Society of Arts (RSA).
SEPTA TECHNICAL TOURS

Fern Rock Shop* - The shop is located at the north terminal of SEPTA's Broad Street heavy rail line. It contains daily (Car House) and heavy maintenance (Shop) facilities for the Broad Street subway. The facility also serves as a central back shop to support city, suburban and regional rail rolling stock. In this function, the shop is a combination of distinctive workshops, which include air brake, compressor, machine, wheel and axle and truck repair and overhaul functions. Located at the facility is a SEPTA Broad Street subway car shell that was part of the evaluation of the Broad Street fleet life extension. This assessment is the subject of paper JRC-2265, *Evaluation of Subway Car Shell Condition for Extended Service*.

Date: Wednesday, April 5, 2017 (Please meet in the hotel Lobby at 8:00 am)
Duration (leave/return to hotel, estimated): 3 hours
Cost: $20.00 per person
Transportation: Train
Maximum number of participants: 50
PPE required: none. No open-toe shoes, please.

Crum Creek Viaduct* - New $56M structure carries SEPTA's Media-Elwyn regional rail route over Crum Creek. The original structure was built in 1895 by the Pennsylvania Railroad and was replaced by SEPTA during the summer of 2016. The planned tour includes a site visit to a viaduct of similar age and construction, as well as the completed Crum Creek structure.

Date: Wednesday, April 5, 2017, for short presentation, then board bus. (Please meet in hotel lobby (or room to be determined) at 8:00 am)
Duration (leave/return to hotel, estimated): 3 hours

Cost: $20.00 per person
Transportation: Bus
Maximum number of participants: 40 (based on seated capacity of 40-foot transit bus)
PPE required: None. Good closed-toe walking shoes required; tour will involve moderate walking on unpaved paths on uneven ground.

*Please note these tours run simultaneously so you can only choose one.
2017 Joint Rail Conference Speakers and Presentations

WEDNESDAY, APRIL, 05

**Track 1** Railroad Infrastructure Engineering
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

1-1
BALLAST & TRACK SUBSTRUCTURE 1
Third Level, Aria A 1:45pm - 3:30pm

Session Organizer: Andrew Rohrman, University of Massachusetts Amherst, Amherst, MA, United States

**Track 2** Rail Equipment Engineering
Track Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States
Track Co-Organizer: Bryan Schlake, Pennsylvania State University, Altoona, Altoona, PA, United States

2-1
VEHICLE AND COMPONENT ANALYSIS AND TESTING
Third Level, Concerto A 1:45pm - 3:30pm

Session Organizer: Michael L. Burshtin, Amtrak, Richland, NJ, United States

**Track 3** Safety and Security
Track Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States
Track Co-Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

6-1
GRADE CROSSING SAFETY IMPROVEMENTS
Third Level, Aria B 1:45pm - 3:30pm

Session Organizer: Benjamin Sperry, Ohio University, Athens, OH, United States

**Track 4** Electrification
Track Organizer: John M. Grantham, Atkins North America, Calverton, MD, United States
Track Co-Organizer: Bih-Yuan Ku, National Taipei University of Technology, Taipei, Taiwan

9-1
RAILROAD ELECTIFICATION ISSUES NO. 1
Third Level, Concerto B 1:45pm - 3:30pm

Session Organizer: John M. Grantham, Atkins North America, Calverton, MD, United States

**Track 1** Railroad Infrastructure Engineering
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

1-2
BALLAST & TRACK SUBSTRUCTURE 2
Third Level, Aria A 3:45pm - 5:30pm

Session Organizer: Shushu Liu, Pennsylvania State University, State College, PA, United States
Signal and Train Control Engineering
Track Organizer: David Thurston, Parsons Brinckerhoff, Pittsburgh, PA, United States
Track Co-Organizer: Yu Yuan, IBM Research, Beijing, China

3-1
DATA RADIO IMPACTS ON RAIL AND TRANSIT
Third Level, Concerto B 3:45pm - 5:30pm
Session Organizer: David Thurston, Parsons Brinckerhoff, Pittsburgh, PA, United States

Safety and Security
Track Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States
Track Co-Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

6-2
HUMAN FACTORS
Third Level, Aria B 3:45pm - 5:30pm
Session Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

Energy Efficiency and Sustainability
Track Organizer: Brian Donohue, SNC-Lavalin Rail & Transit Engineering North America, Broomfield, CO, United States
Track Co-Organizer: Konstantina “Nadia” Gkritza, Purdue University, West Lafayette, IN, United States

7-1
ENERGY, EFFICIENCY AND SUSTAINABILITY IN RAILWAY SYSTEMS - SESSION 1
Third Level, Concerto A 3:45pm - 5:30pm
Session Organizer: Brian Donohue, SNC-Lavalin Rail & Transit Engineering North America, Broomfield, CO, United States

THURSDAY, APRIL, 06

Railroad Infrastructure Engineering
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

1-3
RAIL CONDITION & MEASUREMENT
Third Level, Aria A 8:00am - 9:45am
Session Organizer: Josue César Bastos, University of Illinois (RailTEC), Urbana, IL, United States

Service Quality and Operations Research
Track Organizer: Clark Cheng, Norfolk Southern Railway, Atlanta, GA, United States
Track Co-Organizer: Rapik Saat, AAR, Washington, DC, United States

4-1
RAILROAD PLANNING AND SCHEDULING MODELS
Third Level, Concerto B 8:00am - 9:45am
Session Organizer: Rapik Saat, AAR, Washington, DC, United States

Safety and Security
Track Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States
Track Co-Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

6-3
RAIL OPERATIONAL SAFETY
Third Level, Aria B 8:00am - 9:45am
Session Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States
TRACK 1  Railroad Infrastructure Engineering
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

1-4
TRACK LOADING & CROSSTIE PERFORMANCE 1
Third Level, Aria A  10:15am - 12:00pm

Session Organizer: Alvaro Canga Ruiz, University of Illinois at Urbana-Champaign, Urbana, IL, United States

TRACK 2  Rail Equipment Engineering
Track Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States
Track Co-Organizer: Bryan Schlake, Pennsylvania State University, Altoona, Altoona, PA, United States

2-2
MODELING, SIMULATION AND USING DATA TO IMPROVE EFFICIENCY
Third Level, Concerto A  10:15am - 12:00pm

Session Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States

TRACK 6  Safety and Security
Track Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States
Track Co-Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

6-4
RAIL SAFETY & RISK ANALYSES
Third Level, Aria B  10:15am - 12:00pm

Session Organizer: John Cockle, Parsons, Redwood City, CA, United States

TRACK 10  Vehicle Track Interaction
Track Organizer: Anand Prabhakaran, Sharma & Associates, Inc., Countryside, IL, United States
Track Co-Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States

10-1
VTI - SESSION 1
Third Level, Concerto B  10:15am - 12:00pm

Session Organizer: Anand Prabhakaran, Sharma & Associates, Inc., Countryside, IL, United States

TRACK 1  Railroad Infrastructure Engineering
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

1-5
TRACK LOADING & CROSSTIE PERFORMANCE 2
Third Level, Aria A  1:30pm - 3:15pm

TRACK 2  Rail Equipment Engineering
Track Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States
Track Co-Organizer: Bryan Schlake, Pennsylvania State University, Altoona, Altoona, PA, United States

2-3
COMPONENT DEFECTS AND CRACK GROWTH
Third Level, Concerto A  1:30pm - 3:15pm

Session Organizer: Bryan Schlake, Pennsylvania State University, Altoona, Altoona, PA, United States
**TRACK 6 Safety and Security**  
Track Organizer: Dave Schlesinger, Parsons, Pomona, CA, United States  
Track Co-Organizer: Greg Placencia, California Polytechnic University Pomona, Alhambra, CA, United States

**6-5**  
**VEHICLE & SYSTEMS SAFETY IMPROVEMENTS**  
Third Level, Aria B  
1:30pm - 3:15pm

Session Organizer: Alice Muna, Sandia National Laboratories, Albuquerque, NM, United States

**TRACK 10 Vehicle Track Interaction**  
Track Organizer: Anand Prabhakaran, Sharma & Associates, Inc., Countryside, IL, United States  
Track Co-Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States

**10-2**  
**VTI - SESSION 2**  
Third Level, Concerto B  
1:30pm - 3:15pm

Session Organizer: Anand Prabhakaran, Sharma & Associates, Inc., Countryside, IL, United States

**TRACK 1 Railroad Infrastructure Engineering**  
Track Organizer: Conrad Ruppert, University of Illinois, Urbana, IL, United States

**1-6**  
**TRACK MONITORING & MEASUREMENT**  
Third Level, Aria A  
3:30pm - 5:15pm

Session Organizer: Michael McHenry, TTCI, Inc., Pueblo, CO, United States

**TRACK 8 Signal and Train Control Engineering**  
Track Organizer: David Thurston, Parsons Brinckerhoff, Pittsburgh, PA, United States  
Track Co-Organizer: Yu Yuan, IBM Research, Beijing, China

**3-2**  
**ISSUES AND TOPICS FOR TRAIN CONTROL INTEROPERABILITY**  
Third Level, Concerto B  
3:30pm - 5:15pm

Session Organizer: John Hofbauer, Parsons, Philadelphia, PA, United States

**TRACK 5 Planning and Development**  
Track Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States

**5-1**  
**RIDERSHIP METRICS AND PERFORMANCE MEASUREMENT**  
Third Level, Aria B  
3:30pm - 5:15pm

Session Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States
Track 8 Urban Passenger Rail Transport
Track Organizer: Brian Donohue, SNC-Lavalin Rail & Transit Engineering North America, Broomfield, CO, United States
Track Co-Organizer: V. DIMITRA PYRIALAKOU, West Virginia University, Morgantown, WV, United States

8-1
URBAN PASSENGER RAIL - PUBLIC INVOLVEMENT AND OUTREACH
Fourth Level, Minuet 3:30pm - 5:15pm
Session Organizer: V. Dimitra Pyrialakou, West Virginia University, Morgantown, WV, United States

Track 9 Electrification
Track Organizer: John M. Grantham, Atkins North America, Calverton, MD, United States
Track Co-Organizer: Bih-Yuan Ku, National Taipei University of Technology, Taipei, Taiwan

9-2
RAILROAD ELECTRIFICATION ISSUES NO. 2
Third Level, Concerto A 3:30pm - 5:15pm
Session Organizer: John M. Grantham, Atkins North America, Calverton, MD, United States

FRIDAY, APRIL, 07

Track 2 Rail Equipment Engineering
Track Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States
Track Co-Organizer: Bryan Schlake, Pennsylvania State University, Altoona, Altoona, PA, United States

2-4
RAILROAD BEARING RESEARCH
Third Level, Concerto A 8:00am - 9:45am
Session Organizer: Jeffrey Gordon, FRA, Cambridge, MA, United States

Track 3 Signal and Train Control Engineering
Track Organizer: David Thurston, Parsons Brinckerhoff, Pittsburgh, PA, United States
Track Co-Organizer: Yu Yuan, IBM Research, Beijing, China

3-3
ALTERNATE TECHNOLOGIES FOR RAIL APPLICATIONS
Third Level, Concerto B 8:00am - 9:45am
Session Organizer: David Thurston, Parsons Brinckerhoff, Pittsburgh, PA, United States
**TRACK 3** Signal and Train Control Engineering  
Track Organizer: **David Thurston**, Parsons Brinckerhoff, Pittsburgh, PA, United States  
Track Co-Organizer: **Yu Yuan**, IBM Research, Beijing, China

**3-4**  
CBTC DESIGN AND PRACTICAL EXPERIENCE  
Third Level, Concerto B  
10:00am - 11:45am

Session Organizer: **David Thurston**, Parsons Brinckerhoff, Pittsburgh, PA, United States

**TRACK 7** Energy Efficiency and Sustainability  
Track Organizer: **Brian Donohue**, SNC-Lavalin Rail & Transit Engineering North America, Broomfield, CO, United States  
Track Co-Organizer: **Konstantina “Nadia” Gkritza**, Purdue University, West Lafayette, IN, United States

**7-2**  
ENERGY, EFFICIENCY AND SUSTAINABILITY IN RAILWAY SYSTEMS - SESSION 2  
Third Level, Concerto A  
10:00am - 11:45am

Session Organizer: **Brian Donohue**, SNC-Lavalin Rail & Transit Engineering North America, Broomfield, CO, United States

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**SAVE THESE DATES**  
**JOINT RAIL CONFERENCES**

- **2018 JRC**: IEEE lead year. Pittsburgh, PA. Chair Dave Thurston.  

- **2019 JRC**: ASCE lead year. Venue and date TBD. (Tentatively week of April 8, 2019)

- **2020 JRC**: ASME lead year. St. Louis, MO. Chair Giuseppe Sammartino.  
  April 21-24, 2020. St. Louis Union Station DoubleTree Hotel  
  100th Anniversary of RTD! The first ASME-IEEE JRC was in St. Louis in 1920.