



2011 RTD FALL TECHNICAL CONFERENCE

“TWIN CITIES RAIL 2011”

**SEPTEMBER 21-22, 2011
MINNEAPOLIS CONVENTION CENTER
MINNEAPOLIS, MINNESOTA**

CONFERENCE PROGRAM



Chair's Welcome Message

It is my pleasure to welcome you all to this year's Rail Transportation Division Fall Technical Conference. I would like to thank the city of Minneapolis for hosting this event and providing us our keynote speaker for the banquet dinner, Edward Byers, Director of Commuter Rail at Metro Transit. We strategically located and planned this year's conference at the same venue and in concert with the Railway Interchange 2011. Hopefully this has allowed many of you to combine the travel time and expense to join us today. Our theme this year is "Twin Cities Rail 2011" and fits in nicely with this great location.

I believe that each year this event gets better and I think this year is no exception. The papers and presentations that we have this week are of an impressive caliber. They cover many different aspects of the rail industry and provide excellent insight to certain issues and solutions. Not only are the papers of exceptional quality, we are seeing an increase in participation from undergraduate engineering students. I encourage all of the students to engage in this event and discover what the railroad industry has to offer.

Our tour this year is at MTS Systems in Eden Prairie and I thank them for offering that to us this Wednesday. I would also like to thank all of our event sponsors. Many companies contribute in different ways to support the event by advertising in our printed program or at our dinner banquet. This support plays a big role towards the bottom line and allows us to keep this conference successful.

If there is anything I can do to make this event more successful or if you would like to get more involved please feel free to let me know. It is very rewarding to be a part of the team that makes this work. The spirit of technological interaction and contribution are what continue to make this conference a success and I look forward to a great few days.

Sincerely,

Jason Reiling
Chairman, ASME-RTD 2011-2012
Director, Design Engineering
Strato, Inc.

Professional Development Hours Record Forms

Participation record forms will be provided upon request to conference attendees who need to track their number of professional development hours (PDHs). Forms are available at the conference registration desk. Conferees should check the rules of their appropriate State licensing body to see if participation in this conference will qualify for credit to maintain a P.E. license or other professional certification.

Tax Deductibility

Expenses of attending professional meetings have been held to be tax deductible as ordinary business expenses for U.S. citizens. Because of changes in the tax code, the current level of deduction is subject to change.

Conference Reception

All conference attendees and guests are encouraged to take the opportunity to meet and discuss ideas with industry peers at the Conference Reception.

The Conference Reception will be held on Wednesday, September 21, beginning at 6:15 PM at the Minneapolis Convention Center. Conference Reception tickets are provided with your name badge to Full Conference Registrants. Additional tickets for the Conference Reception may be purchased for \$50 at the registration desk.

The Conference Luncheon will be held on Thursday, September 22, from 11:30 AM to 1:00 PM at the Minneapolis Convention Center.

Publication Sales

All RTD Technical Proceedings are compiled into separate Proceedings Volume CDs, one copy of each are included in the full and member/non-member single day Conference Registration Fee. Additional copies of the RTD Technical Proceedings may be purchased at the registration desk for \$50 each. Additional copies of the RTD Proceedings can be ordered from:

ASME Order Department
22 Law Drive, Box 2300
Fairfield, NJ 07007-2300

Message Center

A message board will be maintained at the Conference Registration Desk.

Committee Meetings

Tuesday September 20

RTD Executive/Advisory Committee

2:30 pm – 4:00 pm

RTD General Committee

4:15 pm – 5:30 pm

RTD Committee Activity

6:30 pm, Baseball Game (7:10 pm)

General Information

Meeting Locations

Technical sessions will be held at the Minneapolis Convention Center.

Registration

On Tuesday, September 20th, Registration will be held at the Holiday Inn Express, and at the Minneapolis Convention Center on September 21st and 22nd.

Tuesday, September 20 th	12:00 PM to 3:00 PM
Wednesday, September 21 st	7:00 AM to 3:00 PM
Thursday, September 22 nd	7:00 AM to 9:30 AM

Registration Fees

	Early	Late
Members/Authors/Session Chair Full Conference***	\$350	(450)
Members/Authors/Session Chair Single Day**	\$250	(350)
Non Members Full Conference***	\$480	(580)
Non Members Single Day **	\$300	(400)
Students/Retirees Full Conference*	\$100	
Students/Retirees Single Day*	\$75	
Additional Reception Tickets	\$50	
Additional RTD Conference Proceedings	\$50	

Early registration ends on September 7, 2010

(Additional Reception Tickets and Proceedings are available at the Registration Desk)

* Conference fees do not include Proceedings or Reception

**Conference fees include Proceedings, but do not include Reception

***Conference fees include both Proceedings and Reception

Please note: Non-members who pay full conference rate will be eligible for one free year membership in ASME. Fill out the application forms available at the Registration Desk.

SPECIAL EVENTS

Wednesday September 21, 2011

Technical Tour:

7:45 AM – 11:30 AM MTS Systems Corporation
(Bus pick-up at Minneapolis Convention Center (MCC))

Conference Luncheon at MCC

11:30 AM – 1:00 PM Grab & Go (No Program, Authors' Orientation)

Conference Reception, Banquet and Keynote Speaker at MCC:

Keynote: Edward Byers, Director of Commuter Rail, Metro Transit, Who will speak on "Northstar — Minnesota's Commuter Rail"

6:15 PM — 9:00 PM.

Thursday, September 22, 2011

Conference Breakfast

7:30 AM — 8:00 AM Continental (Authors' Only— Orientation)

Conference Luncheon at MCC

11:30 AM – 1:00 PM No Program

Closing Conference Reception:

4:45 PM to 8:00 PM at the Roundhouse Museum (Bus pick-up at the MCC).

PROGRAM IN BRIEF

Wednesday, September 21

Technical Tour—MTS Systems

Bus pick-up at Minneapolis Convention Center (MCC)

7:45 AM – 11:30 AM

Conference Luncheon Grab & Go (Authors' orientation)

11:30 AM – 1:00 PM

RTD Technical Sessions

1:15 PM – 3:15 PM Session 1

3:30 PM – 5:30 PM Session 2

Conference Reception and Banquet (keynote speaker—Edward Byers, Metro Transit). MCC

6:15 PM – 9:00 PM

PROGRAM IN BRIEF

Thursday, September 22

Conference Breakfast Grab & Go

Authors' Only Orientation

7:30 AM – 8:00 AM

RTD Technical Sessions

8:00 AM – 9:30 AM Session 3

9:45 AM – 11:15 AM Session 4

Conference Luncheon—NO Program

11:30 AM - 1:00 PM

RTD Technical Sessions

1:15 PM – 2:45 PM Session 5

3:00 PM – 4:30 PM Session 6

Closing Conference Reception— Roundhouse Museum

4:45 PM - 8:00 PM

Wednesday Afternoon Program

Session 1 (1:15 PM to 3:15 PM)

Rail and Infrastructure

RTDF2011-67023: “Experimental evaluation of resistance to motion of a light rail vehicle”, Jesus Otero, Centro de Ensayos y Analisis, CETEST, Igor Alonso, Centro de Ensayos y Analisis, CETEST, Technical Publication.

RTDF2011-67011: “ Stress And Fatigue Analysis Of A Fiberglass 3rd Rail Support Bracket”, Andrew Smyth, Lucius Pitkin, Inc. (LPI), Cara Winter, Lucius Pitkin, Inc. (LPI), Technical Publication.

RTDF2011-67001: “Estimating Track Capacity Based on Rail Stresses and Metal Fatigue”, David Jeong, US DOT Volpe Center, Benjamin Perlman, US DOT Volpe Center, Technical Publication.

RTDF2011-67025: “Effect of Wheel/Rail Loads on Concrete Tie Stresses and Rail Rollover”, Brian Marquis, US DOT Volpe Center, Michelle Muhlanger, David Jeong, US DOT Volpe Center, Technical Publication.

Wednesday Afternoon Program

Session 2 (3:30 PM to 5:30 PM)

Vehicle and Track Interaction

RTDF2011-67012: “Re-engineering Heavy Haul Turnouts for Passenger Higher Speed Rail Operations”, Blaine Peterson, VAE Nortrak North America, Technical Publication.

RTDF2011-67003: “A Dynamic Wheel/Rail Interaction Model Based on an Euler-Bernoulli Beam Rail Model”, Brad Hopkins, Virginia Tech, Saied Taheri, Virginia Tech, Technical Publication.

RTDF2011-67018: “Energy Harvesting Systems To Power Onboard Railroad Equipment”, Clement NAGODE, Virginia Tech, Mehdi Ahmadian, Saied Taheri, Virginia Tech, Technical Publication.

RTDF2011-67016: “Whole-Body Vibration in Locomotive Cabs”, Amanda DiFiore, QinetiQ North America Technology Solutions Group, Abdullatif Zaouk, QinetiQ North America Technology Solutions Group, Neil Mansfield, Loughborough University, John Punwani, DOT, FRA - Office of Research and Development, Technical Publication.

Thursday Morning Program

Session 3 (8:00 AM to 9:30 AM)

Brakes and Traction

RTDF2011-67002: “ Use of On-Board Hand Brake Monitoring to Prevent Freight Car Wheel Damage and Improve Maintenance and Safety”, Cameron Lonsdale, Amsted Rail, Brent Wilson, Amsted Rail, Technical Publication.

RTDF2011-67031: “Electrically Driven Set & Release Freight Car Hand Brake”, David Brabb, Sharma & Associates, Inc. , Kenneth L., Martin, Anand Vithani, Sharma & Associates, Inc., Monique Stewart, Federal Railroad Administration, John Punwani, DOT, FRA - Office of Research and Development, Technical Publication.

RTDF2011-67009: “Train Braking Distance Estimation under Different Operating Conditions”, Husain Ahmad, Virginia Tech, Mehdi Ahmadian, Virginia Tech, Technical Publication.

Thursday Morning Program

Session 4 (9:45 AM to 11:15 AM)

Wheels and Bearings

RTDF2011-67017: “Implementation of wireless temperature sensors for continuous condition monitoring of railroad bearings”, Javier A. Kypuros, University of Texas-Pan American, Constantine Tarawneh, Andoni Zagouris, Sean Woods, University of Texas-Pan American, Brent Wilson, Andrew Martin, Amsted Rail, Technical Publication.

RTDF2011-67030: “The Process of Spalling in Railroad Wheels”, Steven Dedmon, Standard Steel, LLC, Technical Publication.

RTDF2011-67024: “Wheel Rim Axial Residual Stress and a Proposed Mechanism for Vertical Split Rim Formation”, Cameron Lonsdale, Amsted Rail, John Oliver, Amsted Rail, Technical Publication.

RTDF2011-67007: “Fretting Fatigue of Axles”, Daniel Stone, Hunter Holiday Consulting, Technical Publication.

Thursday Afternoon Program

Session 5 (1:15 PM to 2:45 PM)

Rolling Stock Design

RTDF2011-67029: “Design Outline for a Lightweight Inside Frame Freight Car Truck”, Thomas Engle, Integrated Railmotive Systems Inc., Technical Publication.

RTDF2011-67027: “A Simple Performance Test for Evaluating End Hose Support Straps for Railroad Freight Cars”, Zhen Liu, Strato Inc., Lin Hua, Strato Inc., Technical Publication.

RTDF2011-67015: “Assessment of Fire Hazard and Potential Mitigation Methods in Locomotive Fuel Tanks”, Basant Parida, QinetiQ North America Technology Solutions Group, James Carter, Abdullatif K. Zaouk, QinetiQ North America Technology Solutions Group, John Punwani, DOT, FRA - Office of Research and Development, Technical Publication.

RTDF2011-67021: “Seattle Center Monorail Train Refurbishment Program”, Brian Donohue, Parsons Brinckerhoff, Technical Publication.

Thursday Afternoon Program

Session 6 (3:00 PM to 4:30 PM)

Crashworthiness

RTDF2011-67026: “Observed Equipment Damage and Analytically Estimated Car Decelerations in Selected Passenger Train Accidents”, David Tyrell, USDOT/RITA/Volpe, Karina Jacobsen, Volpe Center, Patricia Llana, USDOT/Volpe Center, Oral Presentation.

RTDF2011-67020: “Comparison of Interior Crashworthiness of Passenger Train Accidents and 8G Dynamic Sled Tests”, Kristine Severson, Volpe National Transportation Research Center, David Tyrell, USDOT/RITA/Volpe, Oral Presentation.

RTDF2011-67010: “Occupied Volume Integrity Testing: Elastic Test Results and Analyses”, Michael Carolan, USDOT/RITA/Volpe Center, Michelle Muhlanger, Benjamin Perlman, US DOT Volpe Center, David Tyrell, USDOT/RITA/Volpe, Technical Publication.

RTDF2011-67006: “Preliminary Finite Element Analysis of Locomotive Crashworthy Components”, Patricia Llana, USDOT/Volpe Center, Richard Stringfellow, TIAX, LLC, Technical Publication.

CALL FOR PAPERS

2012 Joint Rail Conference

April 17–19, 2012

Temple University, Philadelphia, PA, USA

JRC 2012 will be the major, multidisciplinary North American railroad conference encompassing all aspects of rail transportation and engineering research. The conference is a cooperative effort of the seven co-sponsoring organizations and will be held April 17-19, 2012 on the campus of Temple University in Philadelphia, PA.

Papers and presentations are being solicited on railroad civil, mechanical, electrical, and systems engineering, as well as safety, planning, design, operations, maintenance, and management. The conference theme is *TECHNOLOGY TO ADVANCE THE FUTURE OF RAIL TRANSPORT* and will cover freight and passenger rail and transit, encompassing urban metro, light rail, commuter, regional and intercity systems, as well as all forms of freight rail. Topics include, but are not limited to:

Railroad Infrastructure Engineering

Rail Equipment Engineering

Signal & Train Control Engineering

Energy Efficiency and Sustainability

Service Quality & Operations Research

Planning and Development

Safety and Security

Urban Passenger Rail Transport

Paper Schedule: Abstracts due October 1, 2011

To submit an abstract go to:

<http://www.asmeconferences.org/JRC2012/>

Future ASME Conferences

2012 JOINT RAIL CONFERENCE

Philadelphia, PA (Temple University)

April 17-19, 2011

2012 RAIL TRANSPORTATION DIVISION

Fall Technical Conference

Omaha, NE

Date TBD

2013 JOINT RAIL CONFERENCE

Knoxville, TN (University of Tennessee)

April 15-18, 2013

2013 RAIL TRANSPORTATION DIVISION

Fall Technical Conference

Altoona, PA

Date TBD

2014 JOINT RAIL CONFERENCE

Pueblo, CO

March 2014

2011 RTD Fall Technical Conference

