



# Rail Transportation Division Newsletter

Editor: Tom Guins

Fall 2013

## Chair's Message



Another conference is behind us. The Fall Technical Conference, held in historic Altoona, Pennsylvania on October 15 and 16<sup>th</sup>, and for some of us, on the 17<sup>th</sup> also. Total attendance was a respectable 61 – not as high as Omaha (slightly over 100), but better attendance than Minneapolis (47). What makes this a bit more impressive is that the government shutdown and the Tank Car committee meeting in Roanoke happened the same week. I feel we would have had a more than respectable attendance of 75 to 80 had those issues been avoided. The conference was a success however. Our main speaker, Dr. Lori J. Bechtel-Wherry gave an inspiring talk to open the conference. Cameron Lonsdale, Al Bieber and Michael Burshtin finished the first session with a talk on “ASME Rail Transportation Division’s Historical Mechanical Engineering Landmarks – Preserving History and Heritage for the Future”, which was very capably presented by Cameron.

Given the importance of Altoona to the development and expansion of the US railroad industry, their presentation was exceedingly apropos for this conference. A visit by Historian Paul J. Fagley in the persona of Colonel John Armstrong Wright – Founder of Altoona, Surveyor for Horseshoe Curve, owner of Freedom Iron Works and Greenwood Furnace and a member of the founding Board of Directors for Pennsylvania Railroad was the highlight of our Conference Banquet. Again, his speech and presentation was quite apropos for this conference.

Altoona may be the last Fall Technical Conference which is organized through the Rail Transportation Division for a while. We will be concentrating on the Joint Rail Conferences, to make the best of the North American rail related conferences even better!

What does it take to bring a conference to life? It starts with an idea, a possible venue and a theme. It takes a lot of effort from a dedicated group of volunteers and support staff. It takes time schedules, agreements, agreements that become contracts and contracts that become fulfillment. It takes authors and presenters and reviewers. It takes organizations willing to give financial and human resources support. It takes organization, and thoughtful reflection. It takes paying attention to details. It also takes long range planning. It is exciting and exhausting. The Rail Transportation Division, the oldest division in the ASME, has been doing this for almost 100 years! It is a pleasure to work with the best group of volunteers with which I have ever been associated. Thank you for all of your hard work.

Steve Dedmon  
Chair RTD 2013-2014

## FUTURE MEETINGS

2013 - FTC: Altoona, PA, OCT 15-17, 2013

**INFORMATION:** [www.asmeconferences.org/RTDF2013](http://www.asmeconferences.org/RTDF2013)

2014 - JRC: Colorado Springs, CO, April 2-4, 2014

2015 - JRC: San Jose, CA, April 14-16, 2015

2015 - FTC: Venue & Dates TBD

Note that all dates and locations are subject to change as planning progresses.

## New RTD Appointments

The ASME RTD is very excited to announce the following new appointments:

Appointments to the General Committee:

- Rafael Maldonado (ENSCO) – Member at Large

**RTD thanks the following list of companies for their generous support.  
These supporters make success of our technical conferences possible.  
2013 FTC Altoona, PA**

### Sponsors and Advertisers

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**ASME RAIL TRANSPORTATION DIVISION  
2014 RTD Joint Rail CONFERENCE (JRC)**

April 1-4, 2014 – Colorado Springs, Colorado

**NEXT GENERATION RAILROADS, NEXT GENERATION RAILROADERS:**

**COMMITTEE MEETINGS SCHEDULE:**

**TUESDAY – APRIL 1, 2014: COMMITTEE MEETINGS AT HOTEL  
EVENING – NO JRC EVENT.**

**AAR RECEPTION & BANQUET - REGISTRATION SEPARATE FROM JRC**

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**2014 JRC SCHEDULE - ALL FUNCTIONS AT HOTEL:**

**Note: Check the printed program to confirm times and room numbers.**

**WEDNESDAY, APRIL 2, 2014:**

7:00 am - 11:15 am TOUR TTCI (11:15 am, buses load for return to hotel)

1:00 am – 1:45 pm CONFERENCE BOX LUNCH

Tuesday Session Chairs meet with Authors for Orientation

2:00 pm – 3:45 pm PLENARY SESSION

WELCOME SPEAKER - Lisa Stabler, President TTCI

3:45 pm – 4:00 pm REFRESHMENT BREAK

4:00 pm - 5:45 pm (1) CONCURRENT SESSIONS (up to 4 sessions)

FREE EVENING – NO JRC EVENT

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**THURSDAY, APRIL 3, 2014:**

7:00 am - 7:45 am CONFERENCE BREAKFAST

Wednesday Session Chairs meet with Authors for Orientation

8:00 am - 9:45 am (2) CONCURRENT SESSIONS (up to 4 sessions)

9:45 am - 10:00 a m REFRESHMENT BREAK

10:00 am - 11:45 am (3) CONCURRENT SESSIONS (up to 4 sessions)

12:00 pm - 1:15 pm CONFERENCE LUNCHEON (NO PROGRAM)

1:30 pm - 3:15 pm (4) CONCURRENT SESSIONS (up to 4 sessions)

3:15 pm - 3:30 pm REFRESHMENT BREAK

3:30 pm - 5:15 pm (5) CONCURRENT SESSIONS (up to 4 sessions)

6:30 pm - 8:30 pm CONFERENCE RECEPTION, BANQUET & PROGRAM

KEYNOTE SPEAKER – Philip Washington, Chief Executive, Regional  
Transportation District (Denver)

**FRIDAY, APRIL 4, 2014:**

7:00 am - 7:45 am CONFERENCE BREAKFAST

Thursday Session Chairs meet with Authors for Orientation

8:00 am - 9:15 am (6) CONCURRENT SESSIONS (up to 4 sessions)

9:30 am - 11:15 am (7) CONCURRENT SESSIONS (up to 4 sessions)

11:15 am - 12:00 pm CONFERENCE BOX LUNCH – NO PROGRAM

END OF CONFERENCE

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**On-Site Registration at HOTEL:**

Tuesday -12:30 pm – 1:45 pm

Wednesday - 7:00 am – 3:30 pm

Thursday - 7:00 am – 1:30 pm

Friday - - 7:00 am – 9:00 am



# CALL FOR PAPERS & PRESENTATIONS

Abstracts due by **October 28, 2013**  
[www.asmeconferences.org/JRC2014](http://www.asmeconferences.org/JRC2014)

## Joint Rail Conference – 2014

*Railroad Engineering Technology – Learning from the Past, Building for the Future*  
**Colorado Springs, CO**  
**April 2-4, 2014**

**JRC 2014** is the major, multidisciplinary North American railroad conference encompassing all aspects of rail transportation and engineering research.

### **Railroad Infrastructure Engineering**

Design, engineering, and construction of track, bridge structures and grade crossings. Geotechnical engineering of track substructure and right-of-way. Best practices and advances in technology for the inspection and maintenance of the railroad infrastructure.

### **Rail Equipment Engineering**

Motive power technology, vehicle/track interaction, wheels, couplers, components, rolling stock design, manufacturing, materials, and maintenance.

### **Planning and Development**

Project management, planning & financing, new start and expansion development, service planning, environmental impact, and workforce development.

### **Urban Passenger Rail Transport**

Investigations, insights, innovations, and implementations in all aspects of urban passenger rail transport.

### **Signal and Train Control Engineering**

Systems integration, track and wayside components, equipment components, positive train control, interoperability, and microprocessor control.

### **Energy Efficiency and Sustainability**

Energy conservation and efficiency, energy storage modeling, hybrid vehicles, emissions reduction and control and alternative energy sources.

### **Service Quality and Operations Research**

Service availability and reliability, capacity models, impacts of aging equipment on service quality, transport mode integration especially with high-speed rail, passenger information systems and passenger reservation systems, freight railroad network optimization, asset planning, and train scheduling.

### **Electrification**

Catenary design, third rail design, materials, safety, efficiency, electrification approaches, design for high speeds, electromagnetic compatibility (EMC), corrosion control, load flow simulation, energy savings, energy storage devices, regenerative braking, smart electrical supply.

### **Safety and Security**

System safety approaches, safety data management, risk analysis approaches, accident avoidance, accident survivability, train and employee safety, human-factors-informed safety improvements, hazmat risk management, security assurance, emergency preparedness and response.

Abstract can be submitted to: [www.asmeconferences.org/JRC2014](http://www.asmeconferences.org/JRC2014). Please provide abstracts in English and limit size to 400 words. Paper submittal is encouraged but not required. Interested authors will be notified of abstract acceptance. Conference papers will be peer-reviewed and published in proceedings.

The ASME Rail Transportation Division is offering a limited number of conference scholarships. For specific details and questions regarding the scholarship program, please contact Monique Stewart, [FRA-RSEC.PMO@dot.gov](mailto:FRA-RSEC.PMO@dot.gov)

### Joint Rail Conference Participating Organizations:



## V. Terrey Hawthorne Memorial Scholarship Fund Activity Report

The American Society of Mechanical Engineers (ASME) Rail Transportation Division (RTD) continues to be a strong supporter of collegiate researchers, both professors and students, who play a vital role in the advancement of the rail industry. To this end, the ASME RTD offers the ASME RTD Graduate and Undergraduate Student Conference Scholarships, which give students the opportunity to network with rail professionals, present rail research publications, and exchange ideas on rail technological innovations and solutions at the world's premier rail industry conferences including the ASME Joint Rail Conference (JRC) and the ASME RTD Fall Technical Conference. Most importantly, the scholarships increase the awareness of the rail engineering discipline from both an academic and professional perspective.

The ASME RTD was pleased to offer over \$6,000 in student travel scholarships this year. Recipients included four graduate students and two undergraduates from the following schools: Kansas State, Virginia Tech, Rose-Hulman, University of Illinois at Urbana-Champaign, and Penn State at Altoona. All four graduate students authored and presented technical papers, and each undergraduate student submitted an essay.

This year the scholarship committee also held a "Best Essay" contest for the undergraduate students. The award for best undergraduate essay was given to Samuel Beck from Rose-Hulman. During the Conference Banquet we presented Samuel with a 32 Gb metal cased jump drive engraved with his name and "ASME RTD." Here is an excerpt from his winning essay:

*As somebody pursuing a career in this field, I am looking forward to further networking with fellow industry representatives as well as learning about the new technologies in store for railroads in a mechanical atmosphere, and having the opportunity to attend the conference in Altoona would fulfill the above goals and even more. Any information or education I can develop, such as attending the October RTD technical conference, is not only beneficial for myself but will be useful in my ongoing efforts to promote a railroad career for Rose-Hulman students. I have that fire inside to learn as much as possible, and the RTD technical conference is another opportunity for me to do so while I continue my young career.*  
– Samuel Beck, Senior at Rose-Hulman

It is our sincere hope that Samuel and all other students who attended this year's Fall Technical conference came away with a greater understanding and appreciation for the railroad industry and a deepened desire to pursue a railroad career.

### ***ASME RTD Graduate Student Conference Scholarship***

**Purpose:** Fund travel, lodging, and conference registration expenses for scholarship awardees selected to attend and present their research publication at the ASME Joint Rail Conference or ASME Rail Transportation Division Fall Technical Conference.

**Award Amount:** \$1,100.00 USD

**Requirements:**

- The student must submit an abstract and written paper for an ASME conference and have them both accepted through the papers submission and review process.
- The paper topic must be relevant to the rail industry.
- The student must be lead author of the accepted paper.
- The student must receive written notification from the ASME RTD indicating the award of the scholarship.
- The student must deliver an oral presentation of the paper in person at the conference.
- The student must be enrolled and attending a U.S. college or university.

### ***ASME RTD Undergraduate Student Conference Scholarship***

**Purpose:** Fund travel, lodging, and conference registration expenses for scholarship awardees selected to attend the ASME Joint Rail Conference or ASME Rail Transportation Division Fall Technical Conference.

**Award Amount:** \$850.00 USD

**Requirements:**

- The student must be of Junior or Senior status.
- The student must be enrolled in an undergraduate engineering program at their university, college, or technical college.
- The student must complete the application by the deadline indicated.
- The student must submit a maximum 750-word essay outlining why they should be selected to attend the conference and what they hope to gain through attendance (or what the student could contribute to the rail industry). Or, alternatively, a 750-word essay can be submitted that suggests a solution to a real-world rail industry problem.
- The student must be enrolled and attending a U.S. college or university.

If you, or anyone you may know, has an interest in the ASME RTD Graduate and/or Undergraduate Student Conference Scholarship or has questions regarding the V. Terrey Hawthorne Memorial Scholarship Fund, please contact Ms. Monique F. Stewart, ASME RTD Scholarship Program Chair, at [FRA-RSEC.PMO@dot.gov](mailto:FRA-RSEC.PMO@dot.gov).

## Honors and Awards

There are various awards that ASME Society bestows to its members to recognize their dedicated services and their distinguished achievements in the engineering field. Rail Transportation Division also provides three awards at the division level. They are:

**Distinguished Service Award:** this decoration is bestowed for major, significant, and meritorious activity toward fulfilling the programs and ideals of the Rail Transportation Division and the advancement of mechanical engineering in railroad and mass transit fields.

**Rail Transportation Award:** this achievement is often referred to as “Best Paper Award,” recognizes an exceptional paper presented at an RTD technical conference within the previous year.

**Dedicated Service Award:** this recognition honors unusual dedicated voluntary service to the Society marked by outstanding performance, demonstrated effective leadership, prolonged and committed service, devotion, enthusiasm and faithfulness.

We are currently working on several applications for our RTD members. If you are interested and would like to make some recommendations, please contact Li Rose Cheng at [lc@salientsystems.com](mailto:lc@salientsystems.com).

**ASME RAIL TRANSPORTATION DIVISION  
EXECUTIVE COMMITTEE MEMBERS  
JULY 1, 2013 -- JUNE 30, 2014**

**RTD CHAIR & CHAIR GENERAL &  
EXECUTIVE COMMITTEES**

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