



Michigan Tech Students Attend AREMA Conference 2018 in Chicago

David Nelson, Advisor for the Railroad Engineering and Activities Club (REAC), and seven students attended the annual American Railway Engineering and Maintenance-of-way Association (AREMA) meeting from September 15-17, in Chicago. The AREMA conference is the largest annual railway conference in the US.

As part of the student activities, the REAC team, consisting of Alex Christmas (ECE), Maya Price (ECE), Kyle Dick (SCS), Smruti Dash (EEE), and Thomas Wall (ECE) placed 2nd in the student quiz bowl. Additionally, four Tech students were recognized for winning scholarships from the AREMA Educational Foundation.

Alex Christmas was also successful in the undergraduate student poster competition, taking the 2nd place with a poster he and Kyle Dick developed about their project “North American Railroad Signal Aspects and Indications Demo”. The poster describes their project to 3-D print a set of railroad track signals covering all the possible signal combinations for North America, complete with colored LED lighting. Kyle included a computer program with over 2600 lines of Java code to demonstrate more than 130 different light combinations.

Student Project Spotlight—Improving & Expanding Manistique’s Railroad Infrastructure

Senior Design Students from the Civil and Environmental Engineering Department worked with UP Paper, CN Railway and the City of Manistique to evaluate potential modifications and upgrades to Manistique’s Railroad Infrastructure. The team evaluated the city’s aging rail system, and proposed improvements, to increase capacity at UP Paper offer new rail access points for the city. The resulting plan would provide improved traffic flow for road and rail transportation modes, with the potential to industrial growth in the city of 3,000 residents.



Students study logistics facilities at UP Paper

2018 Youth STEM Festival and Science Fair

On April 12th, REAC and RTP supported the annual Michigan Tech STEM Festival and Science Fair. REAC members displayed our track-in-a-box model railroad, and a new railroad signal demonstration constructed by Alex Christmas and Kyle Dick. The big hit with kids and their parents alike was our Griswold Model 52 Mechanical Crossing Bell, which showed how railroads use electro-mechanical engineering to operate safely and efficiently.



REAC Members Alex Christmas and Kyle Dick show off demonstrations and displays at the MTU STEM Festival

UPCOMING EVENTS

[Rail and Intermodal Transportation Summer Youth Program](#)

– Jul 7-13, 2019

The 10th annual program will be again hosted by Michigan Tech and University of Wisconsin – Superior. Terrific field trips on tap! Time to sign up!

[Michigan Rail Conference 2019](#)

– Aug 7-9, 2019

The 2019 Michigan Rail Conference “Think Global, Act Local” will be held in on the Michigan State University campus in E. Lansing this year. Save the date!

[AREMA Conf and Railway Interchange 2019](#)

– Sep 22-25, 2019

AREMA’s 2019 Annual Conference and Railway Interchange will be held in Minneapolis, MN this coming fall.

[Railroad Night 2019](#)

– Sep 26, 2019

Annual marquee event encompassing industry and students on the Michigan Tech campus. Stand by for more details as they develop.

RTP Presents at the SHRP2 Safety Symposium and TRB 97th Annual Meeting

Pasi Lautala, director of Michigan Tech's Rail Transportation Program (RTP) and Aaron Dean, a senior in the ME Department and an undergraduate research assistant for the RTP, participated in the Tenth SHRP 2 "Safety Data Symposium: From Analysis to Results" on Oct 6 in Washington, DC. The Symposium included nineteen selected presentations by researchers who use the SHRP 2 Naturalistic Driving Study database. Michigan Tech was the only institution invited to make two presentations in the conference and Dean was the only undergraduate presenter.

Lautala, together with David Nelson also presented a paper "The Assessment of Driver Compliance at Highway-Railroad Grade Crossings Based on Naturalistic Driving Study Data" at the 97th Transportation Research Board (TRB) Annual Meeting. Sangpil Ko had a poster presentation on his paper "Advanced Wood Biomass logistics for Co-firing in existing Coal Power Plant: Case Study of the Great Lakes States" which was also selected to be published in the Transportation Research Record. Lautala also chaired the AR O40 Standing Committee on Freight Rail transportation.

Scholarships Awarded to REAC Members

Congratulations to our scholarship winners! Sponsored by CN, the Michigan Tech Rail Transportation Scholarships were awarded to Aaron Dean (ME), Alex Christmas (CE) and Claire Hill (ME).

Additionally, the American Railway Engineering and Maintenance-of-Way Association (AREMA) awarded scholarships to four students from Michigan Tech. Alex Christmas won the CN Railway Company Scholarship, while Smruti Dash, Alyssa Leach and Derek Owen each won Michigan Tech Alumni Scholarships. Congratulations to all of our scholarship

Transportation Day and Railroad Night 2018

The 14th iteration of Michigan Tech's Railroad Night was held on the evening of September 13th. A lively crowd of more than 60 participants gathered in the lobby of the Rosza Performing Arts Center. Bill Soule, recently retired from Tech warmed up the crowd with an overview of the rail program's history. Mr Don Graab, retired VP Mechanical from Norfolk Southern Railroad gave the keynote address, focusing on his experience in the industry and providing some valuable insight for students looking for possible careers in railroading.



Don Graab, delivers his keynote at Railroad Night 2018

Transportation Day preceding the big event gathered representatives from nine companies representing the transportation industry under the tents on the campus mall.

REAC Fall Field Trip

Members of the Railroad Engineering and Activities Club travelled to Escanaba to tour the hometown railroad, the Escanaba & Lake Superior. Mike Logan showed off the railroad's extensive contract railcar repair facility, one of the largest in the Midwest. The shop is capable of modifying and repairing railcars of all types. The group also toured the CN Gladstone Yard, which included a look at one of the railroad's locomotives from the inside.



REAC Members pose for a photo inside of ELS' cavernous Railcar Repair Shop in Escanaba on the Fall Field Trip

ON THE ROAD

- 16–19 Sep—REAC: AREMA Annual Conference in Chicago, IL
- 6 Oct—Pasi and Aaron Dean at SHRP2 Symposium in Washington DC
- 11 Nov—REAC: Fall Trip to Escanaba, including tours at the ELS and CN
- 6-11 Jan—Pasi, Dave, and Sang Pil at TRB 97th Annual Meeting
- 26-28 Jan—Dave Nelson at the AREMA Committee 24 meeting in FL
- 5-8 Apr—REAC: Spring Trip to Detroit including tours at the Anderson's in Toledo, the Ford Rouge Complex, and the M1 Rail Headquarters.

RTP GUEST SPEAKERS

- 13 Sept—Don Graab, Retired VP Mechanical, NS, Keynote for Railroad Night
- 15 Oct—Brent Marsh, Wisconsin Southern Railroad
- 12 Nov—Justin Hicks, REMPRES
- 10 Dec—Dave Thomson, Hasnson Professional Services



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