Michigan Tech will collaborate with the Michigan Department of Transportation, Office of Rail to co-organize the third annual Michigan Rail Conference. The event will take place on August 19-20, in Grand Rapids, and is expected to expand on the success of past two conferences. The venue is the Eberhard Center on the Grand Valley State University campus. The events starts with a field trip in the afternoon of Aug 19, followed by a full day of rail industry presentations on Aug 20th. Joe Szabo, Executive Director of the Chicago Metropolitan Agency for Planning (CMAP) and former Federal Railroad Administrator will be our keynote speaker this year! For more information, registration and sponsorship opportunities, please visit the Conference Website.

**Railroad Club visits Union Pacific Headquarters**

This year’s Railroad Engineering and Activities Club (REAC) Spring trip was hosted by Union Pacific (UP) Railroad at their headquarters in Omaha. Fifteen Michigan Tech students had an awesome time, with tours of the Harriman Dispatch Center and Council Bluffs rail yard as well as the UP Headquarters itself. A highlight of the visit was dinner on the UP Heritage Fleet dining cars, hosted by Greg Garrison, Vice President of North Region and Michigan Tech Executive Sponsor. Our group returned with unforgettable experience and a great exposure to the intricacies of one of North America’s flagship railroads!

**UPCOMING EVENTS**

- **Rail and Intermodal Transportation Summer Youth Program**  
  - Jul 26-Aug 1, 2015  
  - The 6th annual program, hosted by Michigan Tech and University of Wisconsin – Superior.

- **Michigan Rail Conference**  
  - Aug 19-20, 2015  
  - 3rd Annual Conference at the Eberhard Center in Grand Rapids, MI

- **Railway Interchange 2015**  
  - Oct 4-7, 2015  
  - The Minneapolis Convention Center in Minneapolis, MN

- **2nd Annual Rail Day/Expo and Rail Night XI**  
  - Oct 20, 2015  
  - Michigan Tech Campus, hosted by Michigan Tech Rail Transportation Program and Railroad engineering and Activities Club (REAC).
First Ph.D. Graduate for Rail Transportation Program

Hamed Pouryousef graduated in Spring 2015 as the first Ph.D. student of the RTP under supervision of Dr. Pasi Lautala. His research focused on the application of timetable management techniques (e.g. rescheduling and timetable compression) in the U.S. rail environment and their effect on capacity utilization and level of service parameters. The title of his dissertation was “Timetable Management Technique in Railway Capacity Analysis: Development of the Hybrid Optimization of Train Schedules (HOTS) Model”. The HOTS model can be used to complement a commercial rail simulation model (or timetable management tool) in the development of a conflict-free and compressed timetable for a given corridor. The HOTS model is a multi-objective mixed integer linear programming (MILP) model which can also be used, under certain conditions, as linear programming (LP) model. HOTS is applicable to various corridor configurations, including single, double and multiple track corridors using both directional and non-directional (bi-directional) operations patterns.

Student Project Highlights

The Rail Transportation Program continues to support a variety of undergraduate student projects in rail topics. Following up on last year’s Center-beam Rail Car conversion project from a mechanical engineering team and Intelligent Jumper Cable project by electrical engineering, we had two more major projects this year. The first was an electrical project sponsored by UP to devise a system for measuring the effectiveness of a rail shunt in the field, improving the safety of maintenance crews. The team of electrical engineers evaluated several alternatives and developed a prototype shunt tester with promising results. The second project was a civil engineering senior design effort to prepare a site development plan for improvements at the Wayne Industries warehouse complex in Wayne, MI. The project involved planning for a new rail-served warehouse in a very constrained site. It appears that Wayne Industries began implementing some of the ideas from this study before the project even ended!

IN THE NEWS

- P. Lautala quoted in NY Times article; "Human Behavior and Physics Hamper Rail Safety Systems"
- Dave Nelson and Steve Landry quoted in Trains Newswire, February 13, 2015, “Despite drop in collisions, intersections of roads and rails still a dangerous place”
- Michigan Tech to host 6th annual transportation youth program, Trains Newswire, March 3, 2015
- P. Lautala interviewed by the National Public Radio’s Marketplace on “Freight Rail is King in U.S.”
- Michigan Tech Students Will Dallman and Michael Mandalari, Smart thinking: jumper cables, Trains, May 2015, pg 19

VISITORS TO TECH

- 1/22/2015 Art Menard, E&LS Railroad, presented talk on railroad car shop to REAC
- 2/12/2015 John Rickoff, Lake State Railway CEO presented Beyond The Renaissance
- 2/27/2015, Brent Wilson, Amsted Rail, presented Railroad Bearing and Wheel Failures
- 3/3/2015, Phil Pasterak, Parsons Brinkerhoff, presented High Speed Rail and Urban Rail Systems
- 3/17/2015, Brian Buchanan, CN, Operations and Freight Movement Beginning To End
- 3/24/2015, Mike McHentry, TTCI, provided a virtual presentation, Track Materials and Geometry
- 3/31/2015, Brad Howard, NY Air Brakes, provided a virtual presentation, Autonomous and Remote Train Operations

MORE NEWS AT WWW.RAIL.MTU.EDU