



International Railroad Engineering

In the early 1960s, there were 850,000 people in the US railroad industry; by 2004, this number had decreased to 200,000. During this period, most universities eliminated their railroad engineering courses and faculty. Today, an ever-increasing demand for freight rail transportation and the reality that many railroad engineers in management are close to retirement have created a critical need for more railroad engineers. Responsive to the changing world, Michigan Tech is becoming known nationwide for its international summer program in railroad engineering.

Dr. William Sproule and Pasi Lautala, a PhD student from Finland, are the coordinators of this unique program. Lautala has also begun developing partnerships between the industry and the university, which have generated much interest in Michigan Tech. According to Sproule, “Last year, five of the six largest railroad companies were on campus interviewing potential railroad engineers.”

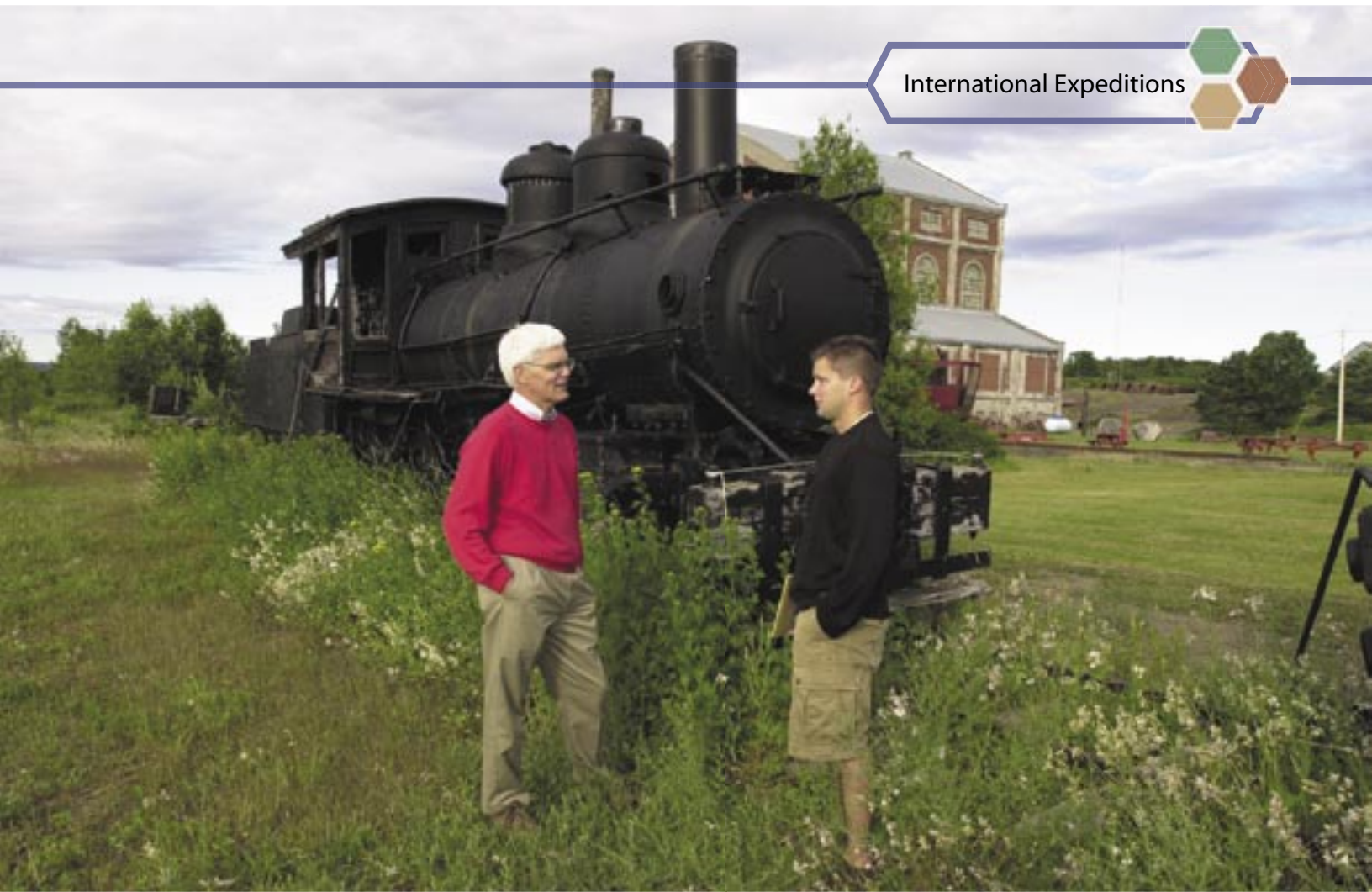
Pasi Lautala

Pasi Lautala consulted for the railroad industry in Chicago after he completed his Master's degree at Michigan Tech in 1997. In 2003, he returned to begin his PhD program and to create the summer railroad engineering program. Lautala says, “We received an incredible response from the railroad industry in the US. I decided to use my dissertation to address these important issues.” Lautala is creating another first for Michigan Tech—applying to the *American Railroad Engineers and Maintenance Association (AREMA)* to form the first student chapter ever for any railroad association.

A Finnish Collaboration

Students spend one week on campus, and then go to Chicago to visit an intermodal yard, a railroad classification yard, and an urban transit rail operation. Finally, they spend three weeks in Tampere, Finland, at the Tampere University of Technology, conducting engineering design work and touring rail facilities. Several students have since graduated and gone on to work for railroads.





Dr. William Sproule

Teaching and hockey are common pursuits in the Houghton area, especially for Dr. Bill Sproule. Michigan Tech provides a foundation in both for Sproule, whose background includes transportation planning, traffic engineering, airport design, and public transit expertise. He recently introduced courses in traffic safety and consulting firm management. Sproule also coaches hockey, and teaches *Hockey History and Culture* in the freshman *Perspectives on Inquiry* course. He explains, “It’s wonderful to be able to contribute so many things to Michigan Tech and the community here.”

Originally from Sault Ste. Marie, Ontario, Sproule graduated from MTU and then returned to Canada to work in the Toronto area. After receiving his PhD from Michigan State University, he taught at the University of Alberta in Edmonton before returning to MTU in 1996. Sproule has found his place here in Traffic Engineering; he notes, “We have a student chapter for the Institute of Transportation Engineers, and we have more student members than any other university in the world.”

His varied research projects often have regional impact: “For the Keweenaw National Historic Park, we examined transportation systems in order to link together parts of the park—we considered streetcars, steam locomotives, and other modes of transportation. We assisted with a study of log truck safety in the UP, and are now involved in a project for improving rail systems in Wisconsin and the UP.”

Sproule’s current interests include several books in the works: one on airport design, one on automated transit systems, and another on local hockey history. In addition, his current PhD students operate diverse programs that run the gamut from railroad engineering education to bicycle facilities to traffic safety for elderly drivers. Finally, he expresses the desire to recruit Canadian students and build partnerships there: “Canada is the largest trading partner of the US. Today, lots of firms are establishing Canadian operations which afford many more opportunities to link with Canada.”