

Michigan Tech Transportation Institute

Program

Michigan Tech
Transportation Institute
(MTTI)

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Michigan Tech

Michigan Technological University

Institute Profile

Outreach Publication

The Michigan Tech Transportation Institute will provide the operating structure, resources, recognition and leadership, in a collaborative environment, that supports research, education and outreach leading to sustainable solutions for transportation.

Michigan Tech Transportation Institute

The Michigan Tech Transportation Institute (MTTI) serves as an umbrella organization bringing together the cross-disciplinary centers, programs and researchers from across campus conducting transportation related research and education initiatives that address national and global needs. Sustainability is central to all MTTI efforts regarding transportation and Michigan Tech researchers are leaders at applying sustainability concepts to transportation problems.

Research

Over \$18M in multi-disciplinary collaborative research has been awarded to MTTI over the past 5 years. Transportation research focuses include, but are not limited to:

Structures

"Bridge Condition Assessment Using Remote Sensing", US Department of Transportation Research and Innovative Technology Administration (RITA)

Systems

"Synthesis of Railroad Engineering Best Practices in Deep Seasonal Frost and Permafrost Areas", Alaska Department of Transportation and the University of Alaska-Fairbanks

Construction

"Carbon Footprint for Hot Mix Asphalt and Portland Cement Concrete Pavements", Michigan Department of Transportation

Materials

"NCHRP 18-13, Specifications and Protocols for Acceptance Tests of Fly Ash Used in Highway Concrete" National Cooperative Highway Research Program

Environment

"Using Wetblade to Control Invasive Species along Roadway Corridors", Minnesota Department of Transportation

Human Factors

"Identifying Costs and Funding Alternatives for Equipped Operating While Intoxicated (OWI) Offenders with Ignition Interlock Devices, Wisconsin Department of Transportation

Technology Transfer

"Traffic Sign Retroreflectivity Training and Technical Assistance", Michigan Department of Transportation

MichiganTech

Houghton, Michigan



University Facts (2009-2010)

Total Enrollment	7148
Civil Engineering	546
Graduate Enrollment	1206
Number of Faculty	464
Placement Rate	87.5%

Michigan Tech ranks in the top 25% of public research institutions by the National Science Foundation and has annual research expenditures exceeding \$57 million. More than 56% of Michigan Tech's student population is enrolled in science and engineering degree fields with a campus-wide graduation placement rate of 87%.

Michigan Tech houses a wide complement of transportation-related programs partnering in research, technology transfer, education, and workforce development. Under the umbrella of the Michigan Tech Transportation Institute, federally funded centers collaborate with state and internally funded centers and programs. Federally funded programs include the UTC-MiSTI, Michigan's Local Technical Assistance Program, and the Region 2 Tribal Technical Assistance Program. State funded research centers and laboratories include the Michigan Department of Transportation funded Transportation Materials Research Center and the Center for Structural Durability. Internal programs include the Center for Technology and Training, and the Rail Transportation Program.

For more information, visit the University's website.
www.mtu.edu

Education and Workforce Development

Samples of the education and workforce development activities sponsored by MTTI are:

- Michigan's only National Summer Transportation Institute Program
- Rail and Intermodal Transportation Summer Youth Program
- Sponsor of Michigan's Construction Career Days
- Transportation Enterprise Program on Michigan Tech campus
- Summer Scholars Program providing undergraduate student research

Leadership

Recognized internationally for their leadership in transportation related activities, our investigators are highly visible at such events:

- American Concrete Institute (ACI)
- Prestressed Concrete Institute (PCI)
- American Railway Engineering and Maintenance-of-Way Association (AREMA)
- ASTM International
- International Society of Concrete Pavements (ISCP)
- International Cement Microscopy Association (ICMA)

Outreach

- Combined effort between the CSD and the Michigan ASCE resulted in ASCE National Historic Civil Engineering Landmark designation to the Mackinac Bridge.
- Dedication ceremony organized by CSD, ASCE, the Mackinac Bridge Authority and MDOT to celebrate the designation, August 2010.
- Annual Rail Night events sponsored by the Rail Transportation Program designed to introduce students to rail industry
- Sponsored keynote speaker and original bridge design engineer at 50th year celebration of the Portage Lake Lift Bridge
- Organized and sponsored Transportation Materials Summit in partnership with the Michigan Department of Transportation

Centers and Programs

A collaborative effort in providing education, outreach, technology transfer, workforce development and multi-disciplinary research, MTTI is comprised of:

- University Transportation Center for Materials in Sustainable Transportation Infrastructure (UTC-MiSTI), www.misti.mtu.edu
- Rail Transportation Program (RTP), www.rail.mtu.edu
- Center for Technology and Training (CTT), www.ctt.mtu.edu
- Tribal Technical Assistance Program (TTAP), www.ttap.mtu.edu
- Center for Structural Durability (CSD)
- Transportation Materials Research Center (TMRC), www.tmrc.mtu.edu

For More Information

For additional information on other transportation related programs at Michigan Tech, please visit www.mtti.mtu.edu.