Marquette University
Transportation Research Center
James A Crovetti, PhD
Director

MU-TRC
- Affiliated with the Department of Civil & Environmental Engineering
- Established to conduct research, perform testing, and provide training in the areas of highway maintenance and operations, traffic engineering, highway pavements, materials, & construction.

MU-TRC
- Undergraduate/Graduate Coursework
  - Introduction to Transportation
  - Highway Planning & Design
  - Traffic Characteristics & Design
  - Airport Planning & Design
  - Pavement Design
  - Pavement Management
  - Advanced Transportation Materials

MU-TRC
- Affiliated Coursework
  - Bridge Design, Urban Planning
  - Construction Costs Analysis & Estimating
  - Construction Equipment & Methods
  - Asphalt Paving Conference
  - Concrete Pavement Seminar

MU-TRC
- Research conducted in the following areas:

James A Crovetti
- Research Interests
  - Analysis of material properties using nondestructive test data
  - Mechanistic pavement design incorporating nonlinear material properties and seasonal effects
  - Laboratory modeling of pavement systems
  - Measurement of load induced deformation behavior
Alexander Drakopoulos

- Research Interests
  - Geometric design of highways
  - Accident analysis
  - Emergency response services
  - Traffic control devices
  - Left-turn control
  - Alternative (Clean) fuels
  - Older drivers
  - Human factors

Christopher Foley

- Research Interests
  - Performance-based structural design
  - Parallel processing in structural engineering
  - Evolutionary algorithms in structural optimization

Baolin Wan

- Research Interests
  - Repair and Retrofit Structures
  - FRP Materials
  - High Performance Concrete
  - Prestressed Concrete
  - Numerical and Experimental Modeling

Affiliated Staff

- Kathleen Hall
  - Research Associate and Lecturer
  - Pavement design, analysis and performance
  - Expert systems

- Reid Knutson
  - Research Associate and Lecturer
  - Pavement design, analysis and performance
  - Soils and foundations

Representative Projects

- Marquette Interchange Instrumentation Project
- In-Situ Monitoring and Testing of IBRC Bridges in Wisconsin
- Fatigue Risks in the Connection of Sign Support Structures
- Performance Evaluation of Tack Coat Materials
- Concrete Cracking in New Bridge Decks and Overlays

MI Instrumentation Project
Mark Federle, PhD, PE  
Professor & McShane Chair

BS: Rose-Hulman Institute of Technology  
MS & PhD: University of Michigan  
9 Years with The Weitz Company  
ENR Top 40 Contractor  
Served as CIO  
9 Years with Iowa State University  
Professor-in-Charge in Construction Engineering

CEM Program Features

• Strong industry/alumni support and involvement  
  - Endowment provided by Jim and Kelly McShane  
  - CEM Industry Advisory Council  
• Required Co-op Participation  
• 135 credit hours  
• Graduate program MS/PhD  
• ASCE & EWB Chapters