



# INSTITUTE OF TRANSPORTATION ENGINEERS

MICHIGAN SECTION

## Spring Technical Session – Wednesday, April 10<sup>th</sup>, 2024 East Lansing, MI

**Location:**

MSU Union

49 Abbot Rd, East Lansing, MI 48824

Hosted by John Engle, Michigan Department of Transportation

Michigan State ITE Student Chapter

Parking: <https://www.cityofeastlansing.com/ParkingDowntown/>

### **Meeting Schedule**

Check-In/Registration		
8:00 am	Doors Open: Registration, Coffee & Networking	
Morning Session		
Time	Topic	Presenter(s)
9:05 AM	<b>Introduction</b>	<b>Garrett Dawe, MDOT</b>
	<i>Meet Garrett Dawe, the new Engineer of Traffic and Safety at MDOT.</i>	
9:15 AM	<b>Lessons Learned from the M-14 &amp; Barton Drive Planning and Environmental Linkages (PEL) Study</b>	<b>Patrick Cawley, AtkinsRealis</b>
	<i>The presentation will focus on lessons learned for the technical analyses (safety, traffic, and environmental), purpose and need, alternatives analysis, and public/stakeholder engagement. The PEL successfully applied a mix of in-person and virtual public engagement. The presentation will document best practices from the engagement efforts and how they can be applied on other projects.</i>	
9:45 AM	<b>ROW PDF to GIS Conversion</b>	<b>Matt Fitch, MDOT</b>
	<i>A history of MDOT ROW maps – obstacles and methods for moving towards a GIS.</i>	



10:15 AM	Break	
10:30 AM	<b>MSU Student Poster Session</b>	<b>MSU Graduate Students</b>
	<i>Israt Khan</i>	<i>Rear-end Crash Risk Estimation and Influence of Heavy Vehicles on Freeway Applying Extreme Value Theory</i>
	<i>Md Tanvir Ashraf</i>	<i>Conflict Resolution Behavior of Autonomous Vehicles in Mixed Traffic Environment</i>
	<i>Magdalena Cavka</i>	<i>Evaluation of Dynamic Speed Feedback Sign in Transition Zone from Freeway to Non-Freeway Areas</i>
	<i>Sagar Keshari</i>	<i>Evaluation of Dynamic Message Sign Messages on Driver Behavior at Bridges During Winter Weather Conditions</i>
	<i>Sakar Pahari</i>	<i>Evaluating the Combined Use of Speed Feedback Trailers and Law Enforcement Vehicles at Freeway Work Zone Lane Closures</i>
	<i>Vahid Bahrami</i>	<i>Safety Effectiveness of Sinusoidal Rumble Strips in Rural Highways</i>
	<i>Amirali Soltanpour</i>	<i>Electrifying Travels Along Lake Michigan Circuit</i>
	<i>Behdad Ghafarnezhad</i>	<i>Exploring Impacts of Electricity Tariff and Power Grid Constraints on Charging Behavior and Fast Charging Infrastructure Deployment in Urban Networks: an Activity-based Approach</i>
	<i>Hamid Mozafari</i>	<i>Leveraging Alternative Fuel Vehicles in Operation and Asset Management Strategies to Reduce Fleet Economic and Societal Impacts</i>
	<i>Sajjad Vosoughinia</i>	<i>Timetable Synchronization Optimization for Urban Rail Transit Network</i>
	<i>Akinfolarin Abatan</i>	<i>Evaluation of Driver Performance on Speed-Change Lanes - Insights from NCHRP 15-75</i>
	<i>Yazmin Dasgar</i>	<i>Changes in Risk-Taking Behavior Before and After Onset of the COVID-19 Pandemic</i>
	<i>Gagan Gupta</i>	<i>Driver Merging and Lane Utilization Behavior Approaching Construction Lane Closures</i>
	<i>Sunday Imosemi</i>	<i>Impacts of Posted Speed Limits and Roadway Design Elements in Speed Reduction Zones</i>
	<i>Matin Mohammadpour</i>	<i>Driver Yielding Behavior to Non-Motorized Users at Roundabouts</i>
	<i>Alireza Darzian Rostami</i>	<i>Optimizing DC Fast Charging Stations for Electric Vehicles along the Lake Michigan circuit under various budget constraints</i>
	<i>Ardeshir Fadaei</i>	<i>Travel Demand Estimation Targeting Experience of Ego Vehicles in Large-Scale Networks to Replicate Real-World/Time Speed Data under Various Operational Conditions</i>



	<i>Ehsan Kamjoo</i>	<i>A Framework for Optimizing the Placement of Dedicated Lanes for Connected Autonomous Vehicles at Large-Scale Transportation Networks</i>
	<i>Farish Jazlan</i>	<i>Modeling Perception Towards Sustainable Ferries through Ridership Surveys: A Case Study of Michigan Islands</i>
12:00 PM	Lunch	
	ITE Update	ITE Michigan Board of Directors
<b>Afternoon Session</b>		
<b>Time</b>	<b>Topic</b>	<b>Presenter(s)</b>
1:30 PM	<b>Streamlined EV Adventures with Cost-Effective Travel Across Michigan's Terrain</b>	<b>Dr. Mehrnaz Ghamami, MSU</b>
	<p><i>The initiative to establish a comprehensive DC fast charging network aims to enable seamless electric vehicle (EV) travel across Michigan by the year 2030, thereby eliminating range anxiety for EV drivers. The initiative has led to the creation of the Electric Vehicle Charger Optimization (EChO) tool, developed with significant stakeholder input and adaptable for various settings beyond Michigan. It aims to tackle the unique challenges of Michigan's weather, emphasizing the importance of adapting to seasonal demand and technology changes in planning the EV infrastructure. A detailed study of highway travel underscored the need for a strategic approach to placing charging stations in urban areas and to alleviate stress on the electrical grid, integration with distributed energy resources (DER) is analyzed. Additionally, the initiative focuses on enhancing ecotourism by strategically installing EV charging stations around the Lake Michigan Circuit. This ensures tourists have access to dependable and efficient charging, improving their experience in the area. The integration of Level-2 and DCFC stations reflects the project's adaptability to meet EV drivers' needs in the Lake Michigan Circuit, underscoring a dedication to sustainable and innovative transportation solutions.</i></p>	
2:00 PM	<b>Solving Ill-Structured Problems – Comparisons across Students, Faculty, and Professionals</b>	<b>Dr. Kristen Cetin, MSU</b>
	<p><i>This presentation details differences in how individuals solve the types of “ill-structured” problems (i.e., those without a defined correct solution) that are common to engineering practice. The work is drawn from a study that sought to understand differences based on experience, learning style, and other factors that affect the way we approach problem-solving.</i></p>	
2:30 PM	Break	



2:45 PM	Smart Communities Committee	<b>Greg Kruger, HNTB</b> <b>Danielle Deneau, RCOC</b> <b>John Abraham, Macomb County</b> <b>Pete Savolainen, MSU</b> <b>Tony Geara, City of Detroit</b>
	<i>Short presentations with Q/A including:</i>  <i>-Smart Community Infrastructure Readiness (Detroit)</i>  <i>- Michigan State University - A Living Laboratory for Transportation Research: This presentation will provide a high-level overview of mobility research that is occurring across MSU with emphases on smart community applications.</i>  <i>-Smart Mobility in Macomb County</i>	
3:45 PM	Closing Remarks	



**Fees:**

Includes lunch and continuing education seminars with up to **4.0 hours** of Continuing Education Hours (CEH). CEH records will be available online following the event. Please make sure to sign-in at the event.

Payment Due:	ITE Member/ Public Agency	Non-Member Private Industry	Students
EARLY BIRD PRICE (Ends March 27 <sup>th</sup> )	\$45	\$55	\$10
Regular Payment/Registration	\$55	\$65	\$15

Registration: [https://itemichigan.org/?page\\_id=12580](https://itemichigan.org/?page_id=12580)

Continuing education credits: [https://itemichigan.org/?page\\_id=12694](https://itemichigan.org/?page_id=12694)

**POST-EVENT SOCIAL**

*Join us on the Graduate hotel's rooftop bar. Great views of East Lansing and a chance to continue to network with professionals and students.  
 Bar opens at 4:00pm. Drinks are **not** included with registration.*



*Graduate East Lansing*

*133 Evergreen Ave, East Lansing, MI 48823*

**Michigan State University Union**

Second Floor, Ballroom

