



64th Transportation Research Forum

Thursday, April 27th, 2023

DePaul University Conference Center

14 E. Jackson, 8th Floor

Symbols: * presenter | + graduate student presenter

Pre-conference activities

10:15 – 12:15 pm

Technical tours (\$30 fee). Approximately one mile of walking is involved for each tour.

Tour 1: Moving Millions: Chicago's Rail Passenger Terminals. Includes visits to Chicago Union Station and Ogilvie Transportation Center (formerly Chicago and North Western Station), our two busiest rail terminals. Transportation consultants Erik Cempel and Mark Walbrum will be our hosts.

Tour 2: Chicago River Renaissance. This tour will explore freight and passenger transportation as well as environmental topics. Angelia Millsap, a registered botanist, and Craig Phillip, Vanderbilt University and past CEO Ingram Barge Co., and among the guides. Phillip will join the tour at 10:15 am

Tour 3: Agricultural Transportation and Supply Chain Innovation. An outing via chartered minibus exploring the role of Chicago's extensive rail and river systems to agricultural transportation and making stops at several South Side facilities. This tour begins with a riverside stop with Craig Phillip, Vanderbilt University and past CEO Ingram Barge Co. You will be joined by US Department of Agriculture officials. *Note: this tour is 9 am – noon.*

12:15 – 12:55 pm

Briefing for Full Conference Select Registrants. Small group discussion on trends in public transit ridership and planning led by a prominent Chicago-area consultant Chris Kopp. Open to all Conference Select registrants, which is just \$50 more.

Regular conference activities

1 – 1:25 pm

Welcome session (Room 8005)

- Introduction by Joseph Schwieterman and our host committee. Greetings from the three co-host universities, the University of Illinois Chicago, Northwestern University, and DePaul University. Screening of short film on TRF (3 minutes)

1:30 - 3:00 pm

Panel 1: Gender and Experiences of Personal Safety in Transportation (Room 8005)

- *Dr. Alyssa Ryan**, University of Arizona, *Dr. Ying Song,** University of Minnesota, *Greg Lindsey**, University of Minnesota, *Jordan Kocak,** Hennepin County, MN,
Moderator/discussant, *Frank Douma, University of Minnesota*

Session A: Evaluation of Surface Transportation and Land-Use Challenges (Room TBA)

- America's Rural Intercity Bus System: A Review of Federal Transit Administration's 5311(b) Program
Mark L Szyperski | On Your Mark Transportation, LLC
- Solutions for State Highway Agencies to Satisfy Matching-Funds Challenges in the IIJA Era
Deepak Benny+, Samuel Labi, Purdue University*
- Studying Property Owners' Decision-Making Process to Trade Land in Run-Down Areas with New, Accessible Apartments
Ali Mohammadi, Shima Mafi, Pooria Choobchian+, Sybil Derrible, Hojjatollah Soleimani, P.S. Sriraj, University of Illinois Chicago*

Session B: Mobility Innovation and Policy – Graduate Student Session (Room TBA)

- Impacts of emerging transportation paradigms on highway design, maintenance, and expenditures
Zainab Saka+, Isaiah C. Mwamba+, Samuel Labi, Purdue University*
- Strategies of integration with innovative mobility options to complement public transit networks
Pietro Buffoni+, University of Chicago Illinois*
- Performance Metric for Equity & Microtransit: Comparing Modes in a Suburban Setting
Amy Hofstra+, Kazuya Kawamura, P.S.S. Sriraj, University of Illinois Chicago*
- Analysis of Supply Failures in the Chicago Transit Authority Transportation System Based on Zip Code and Its Impact on the Effectiveness of the System as a Whole
Genevieve Buthod+ and Patrick Ronan*+, Loyola University Chicago*
We expect the final program to have just three presenters

3 – 3:20 pm Coffee break sponsored by High Speed Rail Alliance

3:20 - 4:50 pm

Panel 2: Perspectives on Chicago's Public Transportation System (Room 8005)

- Panel Discussion moderated by Chris Kopp, HNTB, with Suzanne Mosher, Amtrak, Jesse Elam, Cook County, and David Kralik, Metra, each providing updates on key Chicago-area projects.
- The Evolution of Chicago's Commuter Rail System, *John Allen, consultant*

“Flash Presentation” Research Showcase (Room TBA). Brief 10-minute presentations and Q&A with some of our poster presenters who have submitted academic papers. Each will share highlights, inviting you to visit their posters starting at 5 pm. For the flash-presentation lineup, see the Poster Session below.

Session D: Technology and Autonomous Vehicles – Graduate Student Session (Room TBA)

- Comparison Study for the Level of Service (LoS) of Pre- Deployment, and Post-Deployment of Connected and Autonomous Vehicles (CAVs) in South Carolina
Reginald Dupree+, South Carolina State University*
- Parking Infrastructure Redistribution and Pricing in the Era of Autonomous Vehicles
Mohammadhosein Pourgholamali+, Mohammad Miralinaghi, Samuel Labi, Purdue University*
- Robots at your doorstep? Acceptance of near-future technologies for automated parcel delivery
Spencer Aeschliman+, Maaher Said, Amanda Stathopoulos, Northwestern University*

5:00 - 6:30 pm

Poster Session (Room TBA). Presenters scheduled to make a flash presentation Research Showcase in the 3:20 – 4:50 pm session denoted by “RS” below.

- Englewood Nature Trail Agro-Eco District for the Transportation Research Forum
Bweza Itaagi, Tanya Ward, Growing Greater Englewood*
- Going the Extra Half-Mile: Constructing Demographic Ridership Models for the Chicago Transit Authority
Trevor Roberts+, DePaul University*
- Future transportation equity: Redefinition, prerequisites, and new directions towards assessing readiness for a future with connected and autonomous vehicles.
Ouafa Benkraouda+, Purdue University (RS)*
- Impacts of Ride-Hailing Services on Transportation Network Performance in the Birmingham Region
Virginia Sisiopiku, Furat Salman, University of Alabama Birmingham (RS)*
- Impacts of COVID-19 on Motorcycle Safety in Florida
Hongyun Chen, Madalyn Smith+, Amelia Lawson+, Embry Riddle Aeronautical University (RS)*
- Development of Safety Performance Functions (SPFs) for Motorcycle Crashes in Florida for Pre and Post-Pandemic Conditions
Hongyun Chen, Charles Hruda+, Tate Grant+, Embry Riddle Aeronautical University (RS)*
- Ingredients In the European Conversion To Regional Rail And Their Application To U.S. Commuter Rail
Robert Munson, Rail Passengers Association, Illinois Council Representative*
- Understanding the Safety Performance of Elder Pedestrians in Florida
Hongyun Chen, Sarah Murray+, Brock Pennington+, Embry Riddle Aeronautical University*
- Plow the Sidewalks
Alex Nelson, Better Streets Chicago (RS)*
- Driver Anomaly Detection System Using Sensor Fusion
*Tumlumbe Juliana Chengula *+, South Carolina State University (RS)*
- A Data-Driven Approach to Evaluate the Equity Performance of Transportation Investment Programs
PS Sriraj, Jaeyong Shin, Pooria Choobchian+, Pietro Buffoni+, University of Illinois Chicago (RS)*
- The Driver of Economic Development in Airport Communities (RS)
John R. Hubbard, Subhro Mitra and Chad. R. Miller, University of North Texas at Dallas*
- Synthesis of Automated Multimodal Data Collection Techniques and Applications in the U.S.
Maria Bassil+, University of Texas Austin*

TRF Reception, 5:30 pm, with brief remarks by the host committee at 6:15 pm. Beer, wine, soft drinks, and light-food items, including vegetables, flatbread, and pizza. Held in the same room as Poster Session.

A half-hour walking tour for graduate student participants will begin at 6:45 p.m. followed by an informal dinner

Friday, April 28th, 2023
Chaddick Institute at DePaul University
14 E. Jackson, Suite 1600

Symbols: * presenter | + graduate student presenter

8:45 am - 10:15 am

Session D: Public Transportation & Micro-mobility

- Vulnerability and Coping Strategies: The Experience of Public Transit Users in Addis Ababa
*Mintesnot Woldeamanuel**, *Eleni Gebremeskel*, *California State, Northridge*
- Identifying Changes in Mode Choice Behavior Due to COVID-19 Using Multinomial Logit Interaction Analysis and Altitudinal Variables
Mustafa Fardin+*, *Md. Bulbul Islam*, *Dr. Md. Mizanur Rahman*, *Bangladesh University*
- Examining On-Demand Transportation Services with a Focus on Shared Rides: Use and Users, Attitudes, Perceptions, Barriers, and Solutions
Austin Siblu+*, *Ipek Sener*, *Todd Hansen*, *Texas A&M University*

Session E: Rail Freight Economics and Safety

- Trading on energy storage and payload – an analytical model for freight train configuration
Max T.M. Ng+*, *Adrian Hernandez*, *Pablo L. Durango-Cohen*, *Hani S. Mahmassani*, *Northwestern University*
- Assessment of crash frequency and severity for at-grade intersections near highway railroad grade crossing
Paul Omulokoli+*, *Dr. Judith Mwakalonge*, *Dr. Saidi Siuhi*, *South Carolina State University*
- Autonomous Railroad Track Monitoring System
*Neeraj Dhingra**, *Raj Bridgelall*, *Pan Lu*, *Joseph Szmerekovsky*, *Bhavana Bhardwaj*, *North Dakota State University*

Session H: Highway Planning and Electric Vehicle Challenges- Graduate Student Session

- Change orders in highway agency construction contracts: Trends and Lessons Learned
Hessam Arefkhani+*, *Aishwarya Sharma**, *Suyash Padhye+*, *Samuel Labi*, *Purdue University*
- An Investigation of Location-based Factors Influencing Electric Vehicle (EV) Charging Time
Cuthbert Ruseruka+*, *Judith Mwakalonge*, *Saidi Siuhi*, *South Carolina State University and Gurcan Comert*, *Benedict College*
- Prescriptions for anticipated adversities in highway agency finance in the era of electric vehicles
Chishala I Mwamba+*, *Deepak Benny+*, *Samuel Labi*, *Purdue University*

USDA Session #1: Food Supply and Fresh-Food Access, and Agricultural Shipments

- Innovations in Food Accessibility: A Comparison of Evaluation Frameworks to Study Crowdsourced Delivery Participation
Gretchen Bella+*, *Elisa Borowski*, *Amanda Stathopoulous*, *Northwestern University*
- Spatially Explicit Method to Measure Accessibility to Nutritious Food, *Trilce Encarnacion**, *University of Missouri, St. Louis*
- Other content to be announced

10:15 – 10:30 pm Coffee break sponsored by C. Gregory Bereskin

10:30 am – 12:00 pm

Session I: Implications of Climate Change for Transportation (Room 1601), Moderator, Brandon Bordenkircher, University of Chicago

- Impact of Climate Change on the US Inland Waterway Transportation
Zhenhua Chen, Ohio State University*
- Challenges in Local Transportation Policy, Planning, and Implementation for Decarbonization in Japan
Hiroiyuki Iseki, University of Maryland*
- A Novel Framework for Calculating the Environmental Impacts of Airport Operations
Gonçalo Soares Roque, Institute of Transport Science, RWTH Aachen University*

Session J: Travel Choice and Demand Modeling (Room TBA)

- Health Factors, Ageing, Travel Time Elasticity, Value of Travel Time, Out-Patient, Mode Choice, Multinomial Logit, China, CHARL
Patrick McCarthy, Georgia Institute of Technology*
- Innovative Travel Data Collection and Analysis Methods
Kshitij Sharma, Upper Great Plains Transportation Institute*
- Level of Service in Construction Zones and Role of Free Flow Speed on Capacity of Work Zones
Hongjae Jeon, Rahim F. Benekohal, the University of Illinois Chicago*

USDA Session #2 – Further details to TBA (Room TBA)

- The Impacts of Season Extension on Upper Great Lakes Shipping
Daniel Rust and Richard Stewart*, University of Wisconsin Superior*
- Maritime supply chains through US ports under Covid-19: An analysis of resilience, congestion and economic ripple effects, Ricardo Ungo* and Anthony Pagano, University of Illinois Chicago
- Other content to be announced

Session K: Air Passenger Transport Economics and Analysis

- The Network Impact of Consolidation of Full-Service Airlines in the 21st Century
Michael McCormick, Embry Riddle Aeronautical University*
 - Airline Schedule Variability in the Covid Era: Analysis of the Impacts of Covid19 on US Airline Schedule Planning and Service Delivery, 2018 – 2022
Aisling Reynolds, University College Dublin
 - Commercial Short-Haul Flight or Autonomous Mobility-On-Demand: Modeling Air Passengers' Modal Choice
Agatha Kessler Fentress, Embry Riddle Aeronautical University*
 - Air Travel Inter-Island Connectivity: The Case of The Bahamas
Tamilla Curtis, Wilfred Manuela, Embry Riddle University (RS)*
- {note: this session will likely be modified in the final program to have just three presentations}*

12:10 – 1:35 pm

TRF Awards Luncheon. Location: 243 S. Wabash, 9th Floor, a four-minute walk. Sponsored by **Urban Transportation Center | the University of Illinois Chicago.**

Full Conference Select registrants are invited to a private mixer with our luncheon speaker from 11:50 am – 12:10 pm just outside the luncheon venue.

1:45 – 3:15 pm

Session L: Policy and Technical Issues involving Automobile and Truck Transportation (Room TBD). *Moderator, Jill Bernard Bracy, University of Missouri-St. Louis*

- What Drives the Acceptance of Shared Autonomous Vehicles: Empirical Evidence from California Vehicle Survey
- *Md Mokhlesur Rahman*+, Syracuse University, and Jean-Claude Thill, University of North Carolina, Charlotte*
- Automobile Maintenance Costs, Used Cars, and Private Information
Monica Hartmann, University of St. Thomas*
- Evaluating the Impact of Embedding a Matching Platform on the Diffusion of Truck Platooning Technology
Pooria Choobchian+, Hevar Palani, Lauryn Spearing, Bo Zou, and Edward Bury, University of Illinois Chicago*

Session M: Airline Economics and Aircraft Noise Impacts (Room 1601)

- Capacity Structure of U.S. Airports from an Economic Perspective
Fecri Karanki, Volodymyr Bilotkach, Purdue University*
- Aircraft Noise and Educational Attainment
Philip Carthy, Aisling Reynolds-Feighan, Seán Lyons, University College, Dublin*
- Assessing the Impacts of Northeast Alliance between American Airlines and JetBlue Airways
Li Zou, Chunyan Yu, and Daniel Friedenzohn, Embry Riddle Aeronautical University*
- The Cartel Before the Horse? More Analysis of the Early 2000s Air Cargo Cartel
James Nolan, University of Saskatchewan, Zoe Laulederkind, University of Wisconsin-Milwaukee*+
{note: this session will likely be modified in the final program to have just three presentations}*

USDA Session #3 (Room TBA)

- Content to be announced

Session N: Maritime and Global Commerce (Room TBA)

- The Blue Economy: Impact on the Panama Maritime Cluster
Zoila Yadira G. de Castillo, Ph.D. and Onésimo Sánchez, Universidad Tecnológica de Panama, Anthony M. Pagano, University of Illinois Chicago, Miguel Verzbolovskis, Global Center for Climate Mobility, Ricardo Ungo, Ph.D., Old Dominion University*
- The Development of the Port Infrastructure Sufficiency Index
Ju Dong Park, Gyeongsang National University
- Nearshoring of the Textile Industry: The Potential for Latin America
Anthony Pagano, University of Illinois Chicago and Juan José Cabrera-Lazarini, and Samantha Sepúlveda Santos*+, Tec de Monterrey, Mexico*

3:15 – 3:30 pm *Coffee break*

3:30 pm – 4:55 pm

USDA Session #4 (Room TBA)

- Program content to be announced

Session O: Rural, Local and Campus Transportation: Graduate Student Session (Room TBA)

- Campus Multimodal Transportation Interaction and Conflict: Case Study of the University of Maryland
Hiroiyuki Iseki, Ph.D., Maureen Madden+, Aliya Mejias*+, Marta Woldu, Matthew Spaniol*+, Samuel McCormally, MCP, Lawrence Schoen, P.E., University of Maryland*
- Post COVID-19 Travel Patterns: UT Austin Survey
Maria Bassil+, University of Texas*
- Willingness to Pay for not Meeting Heavy Goods Vehicles in Rural Roads: A Discrete Choice Experiment
Stephen Kwasi Nkesah, Nord University+, and Johann Holmgren, Molde University College*

Session P: Attitudinal Research in Transportation – Graduate Student Session (Room TBA)

- Exploring the Potential Impacts of Autonomous Vehicles on People's Travel Behaviors
Md Mokhlesur Rahman+, Syracuse University and Jean-Claude Thill, University of North Carolina, Charlotte*
- Career Motivation for Commercial Pilots
Brett Michael Watts, Embry Riddle Aeronautical University (RS)

The following presentations have yet to be scheduled:

- Nearshoring and Foreign Direct Investment Trends in Mexico and their Potential Freight Transportation Impacts on Texas-Mexico Border Crossings
Michael S. Bomba, University of North Texas

Post-conference activities

5:20 – 6 pm

Optional Walking Tour – Meet at Reception in 14 E. Jackson, Suite 1600. Free, no registration required.

6:20 – 8 pm

Optional Dinner (\$50), Venue to be Announced, within walking distance.

Saturday, April 28th, 2023

Post-conference activity

9:30 – 11:30 am

Tour 3. Chicago's Public Transit System in Transition (\$30 fee). This tour will include a guided tour on the famed Loop Elevated rapid-transit line and stops at key downtown locations.

Note that session details are subject to change. Conference participants must be registered by March 19, 2023 to be included in the final program.

Wednesday, May 3rd, 2023
Post-conference virtual session

- Integration of ITS with Conventional Traffic Management System for Congestion Control in Developing Countries
Ifratul Hoque, Adeeba Naz, Bangladesh University