# Program at a Glance

**Thursday, November 1, 2018**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 a.m.–8:30 a.m.</td>
<td>Registration and Buffet Breakfast</td>
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| 8:30–10:15 a.m.   | **Welcome**<br> *Laurie McGinnis*, Director, Center for Transportation Studies, University of Minnesota  
**Keynote Presentation: The Future of Driving in the Land of Freeways**<br> *Speaker Susan Handy*, Professor, Department of Environmental Science and Policy, and Director, National Center for Sustainable Transportation, University of California, Davis  
Panel discussion to follow keynote presentation. |
| 10:15–10:30 a.m.  | **Break**                                                             |
| 10:30–11:45 a.m.  | **Concurrent Sessions**<br> 1: Topics in Transportation Finance and Economics  
2: Managing Pollutants in the Environment  
3: Shared Mobility and the Transformation of Public Transit Part I: Public Transit  
4: Warning! Entering the Smart Technology Systems Zone |
| 11:45 a.m.–1:30 p.m. | **Luncheon and Presentation**<br> **Opening Comments** *Charles Zelle*, Commissioner, MnDOT  
**Keynote Presentation: The Evolution and Potential of Automated Vehicle Technologies**<br> *Speaker Julie Schoenfeld*, Vice President, Technical Program Management, GM Cruise Automation |
| 1:30–1:45 p.m.    | **Break**                                                             |
| 1:45–3:00 p.m.    | **Concurrent Sessions**<br> 5: Are You Reaching Everyone? Making Sure Transportation Work Is Seen, Heard, and Understood  
6: Advanced Vehicle Technologies  
7: Shared Mobility and the Transformation of Public Transit Part II  
8: Keeping Minnesota’s Bicyclists and Pedestrians Safe |
| 3:00–3:15 p.m.    | **Break**                                                             |
| 3:15–4:30 p.m.    | **Concurrent Sessions**<br> 9: ABC Parking Ramps: Reimagining the Future of Parking and Multimodal Transportation Choices  
10: Solutions in Pavements and Bridges  
11: Transportation Safety and Risk Exposure  
12: Safe and Efficient Freight Movement |
| 4:30–5:30 p.m.    | Reception with Hors d’Oeuvres and Cash Bar |
# Draft Program Schedule

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<td><strong>Keynote Presentation: The Future of Driving in the Land of Freeways</strong></td>
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<td>Speaker:  Susan Handy, Department of Environmental Science and Policy, and Director, National Center for Sustainable Transportation, University of California, Davis</td>
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<td>Many states, including California and Minnesota, have identified reducing driving as an essential strategy to meet their targets for lowering greenhouse gas emissions. How to achieve this strategy, however, remains a question. The rise of ride-hailing services, autonomous vehicles, and other innovations adds to this challenge. How can the research community help policymakers navigate this uncertain future? Professor Susan Handy and her colleagues at the Institute of Transportation Studies, University of California, Davis, are addressing these issues with a series of groundbreaking projects. She will discuss how emerging research results can help state, regional, and local agencies identify the most effective approaches, develop implementation tools, and assess impacts on driving and other outcomes. Following Handy’s presentation, a panel of Minnesota leaders and experts will share perspectives on reducing greenhouse gas emissions in light of these new transportation innovations.</td>
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<td><strong>Topics in Transportation Finance and Economics</strong></td>
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<td><strong>Moderator</strong> Kenneth Buckeye, MnDOT</td>
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<td>Overview of Special Interest Groups’, Government Officials’, and Elected Officials’ Views on a Distance-Based User Fee Demonstration Project</td>
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<td>An Overview of Distance-Based User Fee Projects Conducted in Minnesota and Around the Country</td>
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<td>Accessibility and Behavior Impacts of Bus-Highway System Interactions</td>
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<td>Lessons Learned from the “Farm to Rural Grocery to Wholesale” Backhaul Distribution Model</td>
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<td><strong>Managing Pollutants in the Environment</strong></td>
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<td><strong>Moderator</strong> John Chapman, Department of Bioproducts and Biosystems Engineering, University of Minnesota</td>
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<td>Capital City Bikeway: A Case Study in Green Infrastructure</td>
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<td>Pollution from Urban Stormwater Ponds</td>
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<td>Optimizing Nutrition of Roadside Plants for Pollinators</td>
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<td>Transportation Resilience Innovations—State DOT Considerations</td>
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## Concurrent Sessions (Continued)

### 10:30−11:45 a.m.

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<th>Session</th>
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| 3       | Shared Mobility and the Transformation of Public Transit Part I: Public Transit | Eric Lind, Metro Transit | Park-and-Ride Demand Model Update  
*Benjamin Nault-Maurer, SRF Consulting Group*  
Improving Travel Mobility by Integrating Public Transit and Ride-Sourcing Services  
*Yufeng Zhang, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota*  
Absenteeism Prediction and Extra-Board Driver Scheduling for Metro Transit  
*Xiaochen Zhang, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota*  
Multimodal Access to Twin Cities Transitways  
*Jacqueline Nowak, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota* |
| 4       | Warning! Entering the Smart Technology Systems Zone | Tony Fischer, Metropolitan Council | Lane Departure Warning System  
*Mohammad Faizan, Department of Electrical Engineering, University of Minnesota Duluth*  
Evaluation of the Smart Work Zone Speed Notification System  
*Gordon Panik, Minnesota Traffic Observatory, University of Minnesota*  
Intersection Conflict Warning Systems  
*Erik Minge, SRF Consulting Group* |

### 11:45 a.m.−1:30 p.m.

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<td>5</td>
<td>The Evolution and Potential of Automated Vehicle Technologies</td>
<td>Charles Zelle, Commissioner, MnDOT</td>
<td>Automated vehicles hold promise to reduce traffic congestion, pollution, crashes, and parking demand. But this promise can only be realized with advanced technology that ensures a vehicle’s situational awareness through perception and mapping—in other words, letting it “see” its surroundings. Current systems, however, do not fully support autonomous vehicles on any road shared by driver-operated vehicles. A major need is a high-performance sensor that uses laser light—LiDAR—to give “sight” to the automated vehicle. Julie Schoenfeld founded a company with unique technology to produce such a sensor. She will discuss this technology and share her journey as a serial entrepreneur to illustrate how technology entrepreneurship’s pitfalls can be rerouted to successful peaks.</td>
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### 1:30−1:45 p.m.

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| 5       | Are You Reaching Everyone? Making Sure Transportation Work Is Seen, Heard, and Understood | Frank Douma, Humphrey School of Public Affairs, University of Minnesota | Using Social Media in Transportation Projects and Planning: Lessons From Four Minnesota Case Studies  
*Kathryn Quick, Humphrey School of Public Affairs, University of Minnesota*  
How to Build a Public Engagement Plan Not Based on Assumptions  
*Brenda Thomas, MnDOT*  
Uniformity of Terminology for Circular Intersection Designs  
*Joe Gustafson, Washington County*  
How Planning for Connected and Automated Vehicles Can Help All People  
*Daniel McNiel, Transportation Policy and Economic Competitiveness Program, University of Minnesota* |

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### Concurrent Sessions (Continued)

#### Advanced Vehicle Technologies

**Moderator** Tom Sohrweide, SEH, Inc  
**MnDOT Autonomous Bus Pilot**  
Jay Hietpas, MnDOT  
**University of Minnesota Solar Vehicle Project**  
Erick Sipila, College of Science and Engineering, University of Minnesota  
**Integration of Microsimulation and Optimized Autonomous Intersection Control**  
Jack Olsson, College of Science and Engineering, University of Minnesota

#### Shared Mobility and the Transformation of Public Transit Part II

**Moderator** Ying Song, Department of Geography, Environment and Society, University of Minnesota  
**Taxing Shared Mobility: Pricing Schemes, Rationales, and Ongoing Discussions**  
Bingyan Wu, Humphrey School of Public Affairs, University of Minnesota  
**Matching for Dynamic Ride-Sharing System**  
Pramesh Kumar, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota  
**Impact of Ride-Sharing on Mobility Trends and Vehicle Stock**  
Suhrid Deshmukh, Massachusetts Institute of Technology  
**Effects of Autonomous Vehicle Car-Sharing System on Road Congestion**  
Rongsheng Chen, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

#### Keeping Minnesota’s Bicyclists and Pedestrians Safe

**Moderator** Jim McCarthy, Federal Highway Administration  
**Governing Dockless Bike Share: Early Lessons for Nice Ride Minnesota**  
Austin Hauf, Humphrey School of Public Affairs, University of Minnesota  
**Implementing Low-Stress Bicycle Routing in National Accessibility Evaluation**  
Brendan Murphy, Accessibility Observatory, Center for Transportation Studies, University of Minnesota  
**Counting Together in Minnesota**  
Michael Petesch, MnDOT  
**Methods and Measures for Assessing Pedestrian Exposure to Risk, Crash Risk, and Equity**  
Tao Tao, Humphrey School of Public Affairs, University of Minnesota

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**3:00−3:15 p.m.** Break

**3:15−4:30 p.m.** Concurrent Sessions

#### ABC Parking Ramps: Reimagining the Future of Parking and Multimodal Transportation Choices

**Moderator** Lisa Austin, MnDOT  
**Panelists** Frank Douma, Rachel Dame, Humphrey School of Public Affairs, University of Minnesota; Paul Morris, SRF Consulting Group; Dan Edgerton, Zan Associates  
For more than 25 years, the ABC Ramps have supported multimodal transportation in downtown Minneapolis with services including parking; carpool discounts; connections to bus, light rail, and passenger rail; bicycle parking; showers for bicyclists; and electric vehicle charging stations. The panel will highlight the University of Minnesota, the City of Minneapolis, the MnDOT, and SRF Consulting Group’s recent research and implementation plan looking at past, present, and future strategies to manage parking supply, promote transportation choices, reduce drive-alone trips, and encourage mode shift. Panelists will also address future program opportunities including leveraging shared mobility trends and the use of mobile applications and technology to provide commuters with increased flexibility and choices for transportation to downtown.
3:15−4:30 p.m. Concurrent Sessions (Continued)

10 Solutions in Pavements and Bridges

**Moderator** Manik Barman, Swenson College of Science and Engineering, University of Minnesota Duluth

- **Laboratory and Field Experiences with Nontraditional Fog Seals**
  Ed Johnson, MnDOT

- **Anchorage of Epoxy-Coated Rebar Post-Installed Using Chemical Adhesives/Deterioration of Mixed Rebar and Fiber-Reinforced Concrete Bridge Deck**
  Benjamin Dymond, Swenson College of Science and Engineering, University of Minnesota Duluth

- **Feasibility Study of Enhanced Sensor Data for Bridge Weigh-in-Motion**
  Ravi Kumar, Department of Civil, Environmental, and Geotechnical Engineering, University of Minnesota

- **Effective Treatments of Asphalt Pavement Potholes and Cracks**
  Jared Munch, Swenson College of Science and Engineering, University of Minnesota Duluth

11 Transportation Safety and Risk Exposure

**Moderator** Heidi Schallberg, Metropolitan Council

- **Toolkit Toward Achieving Vision Zero**
  Greta Alquist, Toole Design Group

  Anna Gaichas, Minnesota Department of Health

- **Bicycle Safety on Sidepaths: Results of a Crash Analysis and User Survey in Michigan**
  Hannah Pritchard, Toole Design Group

- **Assessing the Impacts of Pedestrian-Activated Crossing Systems**
  Peter Dirks, Minnesota Traffic Observatory, University of Minnesota

12 Safe and Efficient Freight Movement

**Moderator** Matt Schmit, Humphrey School of Public Affairs, University of Minnesota

- **Berry Boxes on the Move: Mapping Airports’ Role in Minnesota’s Global Medical Supply Chain**
  Travis Fried, Transportation Policy and Economic Competitiveness Program, University of Minnesota

- **Using Truck GPS Data to Evaluate Corridor Freight Flows**
  Christopher Ryan, SRF Consulting Group.

- **Applying Network Optimization Modeling to Public Sector Planning – The Case of the St. Paul Port Authority**
  Eric Beazley, Quetica, LLC

- **Highway Travel Time Reliability and Congestion in Minnesota**
  Michael Iacono, MnDOT

4:30−5:30 p.m. Reception—Hors d’Oeuvres and Cash Bar

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