

## Curriculum Vitae

**FRANK P. DOUMA**  
**Room 295F HHH**  
**301 19th Avenue South**  
**Minneapolis, MN 55455**  
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### Education

JD, University of Minnesota	May 1996
MA, University of Minnesota Public Affairs	November 1995
Dissertation/Thesis Title: The United States and Uniform Safety Standards in International Air Transportation	
BA, Grinnell College, Grinnell, IA Political Science,	May 1992
Concentration in Russian and Eastern European Studies	
Phi Beta Kappa	

### Licenses and Certifications

Attorney, State Bar of Wisconsin. (Licensure/Certification Number: 1027889)	October 1996 - July 31, 2020
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### Academic Appointments

State and Local Policy Program	
Hubert H. Humphrey School of Public Affairs, University of Minnesota: Director	2015 - Present
Direct State and Local Policy Program research and manage transportation policy research projects. Identify new research opportunities, develop scopes of work, draft, edit and present reports. Organize and coordinate work of Masters of Urban and Regional Planning (MURP) degree program. Supervise program administrative staff.	
State and Local Policy Program	
Hubert H. Humphrey School of Public Affairs, University of Minnesota: Research Fellow and Associate Director	2005 - 2015
Project manager for transportation policy research projects. Develop scopes of work, drafted, edited and presented reports. Identify and propose new research opportunities and assist program director in increasing program visibility and strategic planning. Supervise program administrative staff.	
University of Minnesota	
Humphrey School of Public Affairs: Research Fellow: Frank P. Douma	1999 - 2005
Project manager for transportation policy research projects related to telecommunications, Global Positioning Systems, wireless technology travel behavior, corridor planning, and sustainability. Developed scopes of work, drafted, edited and presented reports.	

### Other Professional Positions

Canadian Pacific Railway  
Project Analyst 1998 - 1999  
Trained in many aspects of railroad operations and marketing. Performed economic analysis for major investments. Aided in coordination of grain marketing and operations.

### Current Membership in Professional Organizations

Co-chair, Transportation Research Board 2016 - Present  
Task Force on Data Privacy, Security and Protection Policy (ABJ55T)  
Transportation Research Board 2012 - Present  
Member of Emerging Technology Law Committee (AL040)  
State Bar of Wisconsin October 1996 - Present

### RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

#### Grants, Contract, Awards: External Sources

**Award: Parking FlexPass at ABC Ramps: Integrating Parking and T**

Principal Investigator: Fan, Yingling  
Status: Accepted  
Sponsoring Organization: MN METROPOLITAN COUNCIL  
Award Dates: October 1, 2019 - December 31, 2021

**Project: Parking FlexPass at ABC Ramps: Integrating Parking and Transit  
Options for Sustainable Mobility**

Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: October 1, 2019 - December 31, 2021

**Award: SCC: Leveraging Autonomous Shared Vehicles for Greater C**

Principal Investigator: Zhang, Zhi-Li  
Status: Accepted  
Sponsoring Organization: THE NATIONAL SCIENCE FOUNDATION  
Award Dates: September 15, 2018 - August 31, 2021

**Project: SCC: Leveraging Autonomous Sha**

Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: September 15, 2018 - August 31, 2021

**Award: Analysis for Metro Climate Stats Program**

Principal Investigator: Douma, Frank P.  
Status: Accepted  
Sponsoring Organization: MN METROPOLITAN COUNCIL  
Award Dates: December 17, 2019 - June 30, 2021

**Project: Analysis for Metro Climate Stats Program**

Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: December 17, 2019 - June 30, 2021

**Award: Minnesota Distance Based User Fee Demonstration**

Principal Investigator: Douma, Frank P.  
Status: Accepted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: July 15, 2019 - June 30, 2021

1. **Project: Federal: Minnesota Distance Based User Fee Demonstration**  
Project Team: Frank Douma (Principal), Adeel Lari (Co-Investigator), Lee Munnich (Co-Investigator), Zhirong Zhao (Co-Investigator), Heidi Corcoran (Co-Investigator)  
Status: Approved  
Project Dates: July 15, 2019 - June 30, 2021
2. **Project: State: Minnesota Distance Based User Fee Demonstration**  
Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: July 15, 2019 - June 30, 2021

**Award: FY20-21 CTS Operations**

Status: Accepted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: July 9, 2019 - June 30, 2021

**Project: TPEC FY 20 - Douma**

Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: July 9, 2019 - June 30, 2020

**Award: S&CC-IRG Track 1: Connecting the Smart-City Paradigm wit**

Principal Investigator: Shekhar, Shashi  
Status: Accepted  
Sponsoring Organization: THE NATIONAL SCIENCE FOUNDATION  
Award Dates: September 1, 2017 - August 31, 2020

1. **Project: S&CC-IRG Track 1: Sustainable Urban Infrastructure Systems Framework to advance Access and Wellbeing in Communities**  
Project Team: Frank Douma (Co-Investigator), Anuradha Ramaswami (Co-Investigator), Julie Brown (Co-Investigator), Diana Dalbotten (Co-Investigator), Robert Johns (Co-Investigator), Shashi Shekhar (Principal), Xinyu Cao (Co-Investigator)  
Status: Approved  
Project Dates: September 1, 2017 - August 31, 2020
2. **Project: S&CC-IRG Track 1: Sustainable Urban Infrastructure Systems Framework to advance Access and Wellbeing in Communities**  
Project Team: Frank Douma (Principal)

Status: Approved  
Project Dates: September 1, 2017 - August 31, 2020

**Award: Understanding Manufacturers' Perspectives on Transportat**

Principal Investigator: Munnich, Lee W.

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: November 7, 2019 - July 31, 2020

**Project: Understanding Manufacturers' Perspectives on Transportation in MnDOT District 3: An Industry Cluster Approach**

Project Team: Frank Douma (Co-Investigator), Lee Munnich (Principal), Heidi Corcoran (Co-Investigator)

Status: Approved

Project Dates: November 7, 2019 - July 31, 2020

**Award: Improve Access to Waiver Transportation Used by Minnesot**

Principal Investigator: Zhao, Zhirong

Status: Closed

Sponsoring Organization: NAVIGANT CONSULTING, INC.

Award Dates: May 30, 2018 - May 29, 2020

**Project: Improve Access to Waiver Transportation Used by Minnesota???'s Home and Community-Based Program Participants**

Project Team: Frank Douma (Co-Investigator), Zhirong Zhao (Principal)

Status: Approved

Project Dates: May 30, 2018 - December 31, 2018

**Award: Hennepin County Human Services Transportation Assessment**

Status: Accepted

Sponsoring Organization: HENNEPIN COUNTY

Award Dates: April 1, 2019 - February 28, 2020

**Award: Roadway Safety Institute**

Principal Investigator: Donath, Max

Status: Closed

Sponsoring Organization: US DEPARTMENT OF TRANSPORTATION

Award Dates: September 30, 2013 - September 30, 2019

**1. Project: Identifying and Reconciling Stakeholder Perspectives in Deploying Automated Speed Enforcement**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: August 1, 2014 - May 31, 2017

Annotation: Independent academic studies have shown that the deployment of automated speed enforcement (ASE) results in a reduction in average speed and most types of crashes while in implementation and also reduces related personal injuries and casualties from these crashes. ASE could be especially effective in saving lives and preventing injuries on the rural roads of Region 5, where current enforcement efforts are less effective and fatalities rates are higher due to lower traffic volumes and

higher speeds. Despite this evidence, however, deployment of ASE remains a highly contentious issue as demonstrated by legislative language in some states and at the federal level restricting deployment.

In an attempt to understand the causes for the continued conflict regarding ASE deployment, this research examines the perceptions of affected stakeholders in selected states in Region 5. Rather than directly interviewing stakeholders, this effort seeks to identify those that influence the stakeholders, and determine their points of view. This method measures the points of view of different stakeholders, such as law makers, law enforcement agencies, public safety agencies and departments of transportation through review of public statements, direct interviews and peer interviews to more fully articulate and summarize various points of view.

**2. Project: Examining the relationship bet**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: January 1, 2017 - December 31, 2017

**3. Project: Scenarios and Justification for Automated Vehicle Demonstration in Rural Minnesota**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: April 1, 2018 - June 30, 2019

**Award: FY19 Administrative Support for the Minnesota Freight Ad**

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: August 23, 2018 - August 31, 2019

**Project: Trends for First- and Last-Mile Freight in Minnesota**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: March 8, 2019 - August 31, 2019

**Award: Understanding Manufacturers Perspectives on Transportati**

Principal Investigator: Munnich, Lee W.

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: April 27, 2019 - June 30, 2019

**Project: Understanding Manufacturers Perspectives on Transportation in MnDOT District 3: An Industry Cluster Approach**

Project Team: Frank Douma (Co-Investigator), Lee Munnich (Principal)

Status: Approved

Project Dates: April 27, 2019 - June 30, 2019

**Award: FY19 MCOTA Outreach Support**

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: October 3, 2018 - June 30, 2019

**Project: MCOTA- Frank Douma**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: January 1, 2019 - June 30, 2019

**Award: FY18-19 CTS Operations**

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: June 26, 2017 - June 30, 2019

1. **Project: TPEC FY18 and FY19**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: July 1, 2017 - June 30, 2019

2. **Project: SLPP/CTS Transportation Outrea**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: July 1, 2017 - June 30, 2019

3. **Project: Examining the challenges and o**

Project Team: Frank Douma (Co-Investigator), Xinyu Cao (Principal)

Status: Approved

Project Dates: March 1, 2018 - June 30, 2019

**Award: Support for Pre-Deployment Activities for a Min**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: May 15, 2017 - June 30, 2019

1. **Project: Federal: Support for Pre-Deployment Activities for a Minnesota User-Based Fee Demonstration**

Project Team: Adeel Lari (Co-Investigator), Frank Douma (Principal), Adeel Lari (Co-Investigator), Barbara Rohde (Co-Investigator), Lee Munnich (Co-Investigator)

Status: Approved

Project Dates: May 15, 2017 - June 30, 2019

2. **Project: Non-Federal: Support for Pre-Deployment Activities for a Minnesota User-Based Fee Demonstration**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: May 15, 2017 - June 30, 2019

**Award: Understanding District 2 Manufacturers' Perspectives on**

Principal Investigator: Douma, Frank P.

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: July 13, 2015 - June 30, 2019

**Project: Understanding District 2 Manufacturers' Perspectives on Transportation: An Industry Cluster Approach**

Project Team: Frank Douma, Matthew Schmit (Principal), Frank Douma (Principal), Matthew Schmit, Rani Bhattacharyya (Co-Investigator), John Bennett (Co-Investigator), Lee Munnich (Co-Investigator), Michael Darger (Co-Investigator), William Bussiere (Co-Investigator)

Status: Approved

Project Dates: July 13, 2015 - June 30, 2019

**Award: eWorkPlace Phase III**

Principal Investigator: Lari, Adeel Z.

Status: Accepted

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: March 9, 2017 - February 28, 2019

**Project: eWorkPlace Phase III**

Project Team: Adeel Lari (Principal), Frank Douma (Co-Investigator), Adeel Lari (Principal)

Status: Approved

Project Dates: March 9, 2017 - February 28, 2019

**Award: ABC Ramps Transportation Options**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: October 28, 2016 - February 28, 2019

**Project: ABC Ramps Transportation Options**

Project Team: Adeel Lari (Co-Investigator), Frank Douma (Principal), Barbara Rohde (Co-Investigator), Xinyu Cao (Co-Investigator), Yingling Fan (Co-Investigator), Adeel Lari (Co-Investigator)

Status: Approved

Project Dates: October 28, 2016 - February 28, 2019

**Award: eWorkPlace Phase III**

Principal Investigator: Lari, Adeel Z.

Status: Accepted

Sponsoring Organization: MN METROPOLITAN COUNCIL

Award Dates: October 1, 2016 - February 1, 2019

**Project: eWorkPlace Phase III**

Project Team: Adeel Lari (Co-Investigator), Adeel Lari (Principal), Frank Douma, Adeel Lari (Principal), Adeel Lari (Co-Investigator)

Status: Approved

Project Dates: October 1, 2016 - February 1, 2019

**Award: FY18-19 MCOTA Outreach Support**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: October 20, 2017 - August 31, 2018

1. **Project: FY18-19 MCOTA Outreach Support**  
Project Team: Frank Douma (Co-Investigator), Arlene Mathison (Principal)  
Status: Approved  
Project Dates: October 20, 2017 - August 31, 2018
2. **Project: FY18-19 MCOTA Outreach Support**  
Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: October 20, 2017 - August 31, 2018

**Award: Shared Mobility Governance**  
Principal Investigator: Douma, Frank P.  
Status: Accepted  
Sponsoring Organization: THE MCKNIGHT FOUNDATION  
Award Dates: September 1, 2017 - June 30, 2018

**Project: Shared Mobility Governance**  
Project Team: Frank Douma (Principal)  
Status: Approved  
Project Dates: September 1, 2017 - June 30, 2018

**Award: Analysis of I-405 Traffic Data and Performance Measures,**  
Principal Investigator: Douma, Frank P.  
Status: Closed  
Sponsoring Organization: WASHINGTON STATE DEPT. OF TRANSPORTATION  
Award Dates: June 12, 2017 - March 31, 2018

**Project: Analysis of I-405 Traffic Data and Performance Measures, and  
Recommendations to Improve Corridor Performance - HHH**  
Project Team: Frank Douma (Principal), Barbara Rohde (Co-Investigator), Lee  
Munnich (Co-Investigator), Matthew Schmit (Co-Investigator)  
Status: Approved  
Project Dates: June 12, 2017 - March 31, 2018

**Award: Volunteer Driver Programs in Minnesota: Benefits and Barriers**  
Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: Minnesota Council on Transportation Access (MCOTA)  
Award Dates: 2017 - Present

In FY 2016, the Minnesota Council on Transportation Access (MCOTA) requested a study of Volunteer Programs in Minnesota, with the objectives of documenting the organizations that use volunteer drivers to help meet the transportation needs of their clients, how they organize and fund their volunteer driver programs, and the challenges these organizations face in continuing to provide these services with volunteer drivers, including issues with insurance coverage. Once these were documented, MCOTA requested recommendations regarding which of the identified barriers would be most productively addressed, and what methods would help providers address these barriers.

This research sought to meet these objectives through a survey of providers that use



volunteer drivers in Minnesota and review of current regulations, including insurance. The final report covers the background and need for this study, the survey method followed, a discussion of the results and conclusions from the survey data, and recommendations for how the identified barriers might be addressed.

**Award: FY17 MCOTA Outreach Support**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: October 5, 2016 - August 31, 2017

**Project: FY17 MCOTA Outreach Support**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: October 5, 2016 - August 31, 2017

**Award: ITS Program Legislative Research and Analysis Task 2.0 a**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: INSTITUTE OF TRANSPORTATION ENGINEERS

Award Dates: September 28, 2015 - June 30, 2017

**Project: ITS Program Legislative Research and Analysis Task 2.0 and Task 2.c**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: September 28, 2015 - June 30, 2017

**Award: Center for Transportation Studies Operations-FY2016-2017**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: July 10, 2015 - June 30, 2017

1. **Project: SLPP/CTS Transportation Outrea**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: July 10, 2015 - June 30, 2017

2. **Project: CTS Faculty Scholars Program**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: July 10, 2015 - June 30, 2017

**Award: eWorkPlace**

Principal Investigator: Lari, Adeel Z.

Status: Closed

Sponsoring Organization: MN METROPOLITAN COUNCIL

Award Dates: January 7, 2015 - December 31, 2016

**Project: eWorkPlace**

Project Team: Adeel Lari (Principal), Frank Douma (Co-Investigator), Adeel Lari (Principal)

Status: Approved

Project Dates: January 7, 2015 - December 31, 2016

**Award: Summer Training: developing and implementing plans that**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN METROPOLITAN COUNCIL

Award Dates: May 1, 2016 - September 30, 2016

**Project: Summer Training: developing and implementing plans that are equitable**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: May 1, 2016 - September 30, 2016

**Award: DARTS Mobility Management Evaluation**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: DARTS

Award Dates: October 1, 2014 - September 30, 2016

**Project: DARTS Mobility Management Evaluation**

Project Team: Frank Douma (Principal), Arlene Mathison (Co-Investigator)

Status: Approved

Project Dates: October 1, 2014 - September 30, 2016

**Award: Minnesota Council on Transportation Access Outreach Supp**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: September 22, 2015 - June 30, 2016

1. **Project: Minnesota Council on Transportation Access Outreach Support**

Project Team: Frank Douma (Co-Investigator), Arlene Mathison (Principal)

Status: Closed

Project Dates: September 22, 2015 - June 30, 2016

2. **Project: MCOTA Volunteer Driver Study**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: September 22, 2015 - June 30, 2016

**Award: MASTER: ITS Program Legislative Research and Analysis**

Principal Investigator: Douma, Frank P.

Status: Accepted

Sponsoring Organization: INSTITUTE OF TRANSPORTATION ENGINEERS

Award Dates: February 10, 2015 - April 15, 2016

**Project: ITS Program Legislative Research and Analysis**

Project Team: Frank Douma (Principal), Leili Fatehi (Co-Investigator)

Status: Approved

Project Dates: February 10, 2015 - April 15, 2016

**Award: Impact of Exempting the Recording of Low Level Speed Violations in Minnesota**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: Minnesota Department of Transportation

Award Dates: 2015 - 2016

This report was developed in response to a request from the Minnesota State Legislature to examine the impacts of Minnesota Statute 171.12, Subd. 6, better known as the “Dimler Amendment,” which calls for certain low-level violations of certain speed limits to not be entered on the violator’s driving record. The statute called for an examination of the impacts of increasing the Dimler qualifying range from 5 mph to 10 mph in 60 mph speed zones on travel reliability, travel efficiency, safety, and privacy. Based on the findings of these analyses, the impacts of the 2012 changes were negligible. More significantly, however, in the course of this project, the researchers came upon findings that led them to question the efficacy of the law itself. The public appears to not be aware of the law’s existence, which may be compounded by the fact that the law lays on top of Minnesota’s already complex speed laws and regulations. Further, the exemptions may be benefiting a small, but significant number of repeat offenders, and complicating regulation of commercial vehicle drivers.

**Award: FY14 Minnesota Council on Transportation Access Support**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: December 3, 2013 - August 31, 2015

1. **Project: FY14 MCOTA Support Douma Data**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: December 3, 2013 - August 31, 2015

2. **Project: FY14 MCOTA Support Douma Prime**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: December 3, 2013 - August 31, 2015

**Award: Impacts of Changes to Minnesota Law Exempting Low Level**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: November 22, 2013 - July 31, 2015

**Project: Impacts of Changes to Minnesota Law Exempting Low Level Speed Violations from Driving Records [MnDOT Project ID: Impact of Exempting Low Level Speed Violations ]**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: November 22, 2013 - July 31, 2015

**Award: I-35E MnPASS Extension Community Outreach and Education Study**

Principal Investigator: Munnich, Lee W.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: May 23, 2013 - July 31, 2015

This study examined the feasibility of extending MnPASS Express Lanes on I-35E between Little Canada Road and County Road 96 in the northeastern part of the Twin Cities metropolitan area. The work was funded by a Value Pricing Pilot Program grant from the Federal Highway Administration. This was a pre-implementation planning study designed to develop and evaluate conceptual alternatives for extending MnPASS Express Lanes between Little Canada Road and County Road 96 on I-35E and to identify and evaluate methods for improving bus transit and carpool use in the MnPASS lanes on I-35E. The study sought to explore and analyze a number of scenarios to provide a higher level of service for all I-35E corridor users: those using the general purpose traffic lanes, those using the MnPASS Express Lanes, and those using transit. The goal for the project was to achieve greater efficiency in the corridor through better use of existing infrastructure and to optimize highway system performance and customer service through supportive land-use planning for transit and bike/pedestrian traffic. The study engaged community stakeholders and corridor users to analyze the design, operations, benefits, costs, and public acceptability of each conceptual alternative. The study also engaged community stakeholders in identifying and evaluating additional transit enhancements that could increase transit and carpool use in the I-35E MnPASS Express Lanes.

**Project: I-35E MnPASS Extension Community Outreach and Education Study**

Project Team: Frank Douma (Co-Investigator), Lee Munnich (Principal)

Status: Closed

Project Dates: May 23, 2013 - July 31, 2015

**Award: Understanding District 4 Manufacturers??? Perspectives o**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: September 18, 2014 - May 31, 2015

**Project: Understanding District 4 Manufacturers??? Perspectives on  
Transportation: An Industry Cluster Approach**

Project Team: Frank Douma (Principal), Matthew Kane, Rani Bhattacharyya,  
Lee Munnich, Michael Darger, Ryan Pesch (Co-Investigator)

Status: Closed

Project Dates: September 18, 2014 - May 31, 2015

**Award: SmartTrAC: A Smartphone Solution for Context-Aware Trave**

Principal Investigator: Fan, Yingling

Status: Closed

Sponsoring Organization: US DEPARTMENT OF TRANSPORTATION

Award Dates: June 14, 2013 - February 15, 2015

**Project: SmartTrAC: A Smartphone Solution for Context-Aware Travel and  
Activity Capturing**

Project Team: Frank Douma (Co-Investigator), Gediminas Adomavicius (Co-  
Investigator), Yingling Fan (Principal), Julian Wolfson (Co-Investigator)

Status: Closed  
Project Dates: June 14, 2013 - February 15, 2015

**Award: Identifying and Reconciling Stakeholder Perspectives in Deploying Automated Speed Enforcement**

Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: University of Minnesota (United States Department of Transportation)  
Award Dates: 2014 - 2016

Independent academic studies have shown that the deployment of automated speed enforcement (ASE) results in a reduction in average speed and most types of crashes while in implementation and also reduces related personal injuries and casualties from these crashes. ASE could be especially effective in saving lives and preventing injuries on the rural roads of Region 5, where current enforcement efforts are less effective and fatalities rates are higher due to lower traffic volumes and higher speeds. Despite this evidence, however, deployment of ASE remains a highly contentious issue as demonstrated by legislative language in some states and at the federal level restricting deployment.

In an attempt to understand the causes for the continued conflict regarding ASE deployment, this research examines the perceptions of affected stakeholders in selected states in Region 5. Rather than directly interviewing stakeholders, this effort seeks to identify those that influence the stakeholders, and determine their points of view. This method measures the points of view of different stakeholders, such as law makers, law enforcement agencies, public safety agencies and departments of transportation through review of public statements, direct interviews and peer interviews to more fully articulate and summarize various points of view.

**Award: Understanding and Enhancing the Value of Freight Economy in Minnesota**

Principal Investigator: Munnich, Lee W.  
Status: Closed  
Sponsoring Organization: BNSF RAILWAY COMPANY  
Award Dates: December 1, 2012 - November 30, 2014

Freight transportation plays a considerable role in the economic and community life in Minnesota, but in comparison to other business sectors, the elements of freight movement are not well understood. This study explores the means for understanding and enhancing the value of freight transportation to the Minnesota economy, particularly the private freight rail networks. This study will also engage Minnesota's transportation policy community in understanding how to leverage the dynamics of freight rail to further add value to the state's economy and transportation planning.

**Project: Understanding and Enhancing the Value of Freight Economy in Minnesota**

Project Team: Frank Douma (Co-Investigator), Barbara Rohde (Co-Investigator), Lee Munnich (Principal)  
Status: Closed  
Project Dates: December 1, 2012 - November 30, 2014

**Award: Multimodalism for Small Cities**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: September 11, 2012 - November 30, 2014

**Project: Multimodalism for Small Cities**

Project Team: Frank Douma (Co-Investigator), Carol Becker (Principal)  
Status: Closed  
Project Dates: September 11, 2012 - November 30, 2014

**Award: FY14 Administrative Support for the Minnesota Freight Ad**

Status: Closed  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: August 13, 2013 - September 30, 2014

**Project: FY14 Administrative Support fo**

Project Team: Frank Douma (Principal)  
Status: Closed  
Project Dates: August 13, 2013 - September 30, 2014

**Award: Primary Seat Belt Evaluation Follow-up Study**

Principal Investigator: Douma, Frank P.  
Status: Closed  
Sponsoring Organization: MN DEPARTMENT OF PUBLIC SAFETY  
Award Dates: January 3, 2014 - May 31, 2014

**Project: Primary Seat Belt Evaluation Follow-up Study**

Project Team: Frank Douma (Principal)  
Status: Closed  
Project Dates: January 3, 2014 - May 31, 2014

**Award: Human Services Research and Transportation Planning**

Status: Closed  
Sponsoring Organization: DAKOTA COUNTY  
Award Dates: September 11, 2013 - February 28, 2014

1. **Project: Human Services Research and Transportation Planning**

Project Team: Frank Douma (Co-Investigator), Arlene Mathison (Principal),  
Leah Lundquist (Co-Investigator)  
Status: Closed  
Project Dates: September 11, 2013 - February 28, 2014

2. **Project: Human Services Research and Tr**

Project Team: Frank Douma (Principal)  
Status: Closed  
Project Dates: September 11, 2013 - February 28, 2014

**Award: Minnesota Field Test of CrashHelp**

Principal Investigator: Munnich, Lee W.  
Status: Closed  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: May 14, 2012 - January 31, 2014

**Project: Minnesota Field Test of CrashHelp**

Project Team: Frank Douma (Co-Investigator), Lee Munnich (Principal), Gina Baas (Co-Investigator)  
Status: Closed  
Project Dates: May 14, 2012 - January 31, 2014

**Award: Understanding District 8 Manufacturer's Perspectives on Transportation: An Industry Cluster Approach**

Principal Investigator: Douma, Frank P.  
Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Award Dates: January 18, 2013 - December 31, 2013

As MnDOT seeks to provide a safe and efficient multi-modal infrastructure for the state, it also seeks to improve its ability to enhance the economic vitality of communities in the state by planning for and responding to the transportation needs of its customers. One aspect of this effort is to improve its knowledge of the characteristics of those industries that make the greatest use of the transportation system, and derive some of the greatest benefits from it. This project will employ a qualitative approach (in-person interviews) to obtain a better understanding of the transportation challenges and priorities faced by manufacturers and related industries in District 8, and to identify and recommend potential responses to these needs from MnDOT.

**Project: Understanding District 8 Manufactures' Perspectives on Transportation: An Industry Cluster Approach**

Project Team: Frank Douma (Principal), Matthew Kane (Co-Investigator), Adeel Ahmed (Co-Investigator), Lee Munnich (Co-Investigator), Michael Darger (Co-Investigator), Neil Linscheid (Co-Investigator)  
Status: Closed  
Project Dates: January 18, 2013 - December 31, 2013

**Award: NEMT Coordinators in Minnesota: A Survey of How Minnesota Counties Use Coordinators to Deliver Non-Emergency Medical Transportation**

Project Investigators: Douma, Frank Peter  
Status: Funded

Sponsoring Organization: Minnesota Council on Transportation Access (MCOTA)  
Award Dates: 2013 - Present

States are generally required to provide Medicaid recipients transportation assistance to obtain health-care services. This assistance is commonly referred to as non-emergency medical transportation (NEMT). In Minnesota, NEMT is provided through the state's version of Medicaid, Medical Assistance (MA). The most common form of NEMT in Minnesota, in terms of usage, is known as access transportation services (ATS). Though overseen by Minnesota's Department of Human Services (DHS), counties have the primary responsibility for delivering ATS to MA recipients under the fee-for-service MA program operated by DHS. The manner in which counties provide ATS and manage the program varies depending upon the differences among the counties. This report documents how seven counties and groups of counties in Minnesota organize the delivery and administration of ATS under the state's fee-for-service MA program, and examines the role transportation coordinators play in delivering and administering ATS.

**Award: Transportation Policy and Economic Competitiveness**

Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: State of Minnesota  
Award Dates: 2013 - Present

In its 2013 session, the Minnesota Legislature directed the Minnesota Department of Transportation (MnDOT) to fund research at the University of Minnesota's Center for Transportation Studies on transportation policy and economic competitiveness, including, but not limited to, innovative transportation finance options and economic development, transportation impacts of industry clusters and freight, and transportation technology impacts on economic competitiveness. This workplan continues to implement that directive. Now in its 3rd year, the overall focus continues to be on investigating how innovations in transportation can contribute to economic competitiveness. The Program engages in research, outreach and other related activities that investigate how innovative transportation finance, industry clusters and transportation technologies affect economic competitiveness.

**Award: Transportation Policy and Economic Competitiveness**

Project Investigators: Douma, Frank Peter  
Sponsoring Organization: State of Minnesota  
Award Dates: 2013 - Present

In its 2013 session, the Minnesota Legislature directed the Minnesota Department of Transportation (MnDOT) to fund research at the University of Minnesota's Center for Transportation Studies on transportation policy and economic competitiveness, including, but not limited to, innovative transportation finance options and economic development, transportation impacts of industry clusters and freight, and transportation technology impacts on economic competitiveness. This workplan continues to implement that directive. Now in its 3rd year, the overall focus continues to be on investigating how innovations in transportation can contribute to economic competitiveness. The Program engages in research, outreach and other related activities that investigate how innovative transportation finance, industry clusters and transportation technologies affect economic competitiveness.

**Award: Vehicle Sharing Among Human Service Providers in Minnesota: Steps to Address Barriers**

Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: Minnesota Council on Transportation Access (MCOTA)  
Award Dates: 2013 - Present

Increased vehicle sharing among transportation-service providers in Minnesota has long been identified as an opportunity to reduce costs and increase efficiency, particularly for those organizations providing transportation services to older adults, people with disabilities, and individuals with lower incomes. However, this opportunity remains largely unrealized in Minnesota due to several obstacles. This research project looks at two of the principal obstacles: (i) the vehicle insurance market; and (ii) compliance with motor carrier regulations. The research examines the nature of these obstacles in Minnesota, and how these same obstacles have been overcome in other states that have successful vehicle-sharing systems. Particular attention is given to the policy and legal frameworks that other states have adopted to facilitate and encourage vehicle sharing. The research also examines several case studies in Minnesota where vehicle sharing does occur to inform this analysis. The objective of the research is to identify concrete steps that policy makers in Minnesota can take to increase



vehicle-sharing and make it a more integral part of the larger transportation system.

**Award: Minnesota Council on Transportation Access (MCOTA) Suppo**

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: November 20, 2012 - October 31, 2013

**Project: Minnesota Council on Transportation Access (MCOTA) Support, FY13**

Project Team: Frank Douma (Co-Investigator), Arlene Mathison (Principal)

Status: Closed

Project Dates: November 20, 2012 - October 31, 2013

**Award: University Transportation Centers**

Principal Investigator: Donath, Max

Status: Closed

Sponsoring Organization: US DEPARTMENT OF TRANSPORTATION

Award Dates: August 23, 2006 - March 31, 2013

1. **Project: Tech Plan: Transportation Plan**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: August 25, 2008 - July 1, 2010

2. **Project: Substitution between E-shopping and Travel: Evidence from the Twin Cities- FY09 Tech Plan**

Project Team: Frank Douma (Co-Investigator), Xinyu Cao (Principal)

Status: Closed

Project Dates: August 25, 2008 - August 31, 2010

3. **Project: ITS and Locational Privacy: Suggestions for Peaceful Coexistence - FY10 TechPlan**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: September 1, 2009 - March 31, 2012

Annotation: Continuing developments in the fields of transportation technology and privacy law present an abundance of opportunities for conflict. Without knowledge of the legal framework that applies to emerging technology, Intelligent Transportation System (ITS) developers set themselves up for frustration as ideas that appear flawless in an engineering office may become controversial when they reach the implementation stage. From the legal perspective, advocates of comprehensive privacy law struggle to update existing law at a pace that keeps up with innovative advancements in technology. This project reviewed several cases where implementation of transportation technologies has raised civil liberties arguments, examining them from legal and political perspectives. The understanding of privacy both as a political concept and a legal protection provides the foundation for future ITS progress, allowing new technologies to be developed in ways that can withstand these types of challenges or avoid them altogether.

4. **Project: EMS System Data Integration to Improve Traffic Crash Emergency**

**Response and Treatment - Phase III**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: September 1, 2009 - March 31, 2012

5. **Project: ITS and Transportation Safety:**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: January 1, 2011 - December 31, 2012

6. **Project: ITS Data Needs: How Much Do We Really Need to Know - FY11  
TechPlan**

Project Team: Frank Douma (Principal), Stephen Simon

Status: Closed

Project Dates: January 1, 2011 - June 30, 2012

Annotation: Intelligent Transportation Systems (ITS) need vehicle location, speed, and route data to function. While often this data includes little or no information about the users of the transportation system, many ITS applications require some data about the user, including information about their specific location, travel patterns, and/or identity. Realization of the need to share this data has led to some opposition, or at least political controversy, over whether the benefits of the ITS application outweigh the loss, or perceived loss, of privacy to the user. This project analyzed where the law allows the various stakeholders (ITS system operators and the individuals who use an ITS system) to achieve their goals, and where the law and/or these goals come into conflict. In these latter situations, the research identified what types of data, or methods for obtaining it, create the conflict. The researchers then provide recommendations for resolving these conflicts by suggesting alternative data collection methods and/or means of shielding the identity of the user to achieve similar ends without the level of specificity that originally created the conflict.

7. **Project: SMARTPHONE-BASED TRAVEL EXPERI**

Project Team: Chen-Fu Liao, Frank Douma, Yingling Fan (Principal), Julian Marshall, Chen-Fu Liao

Status: Closed

Project Dates: January 1, 2011 - June 30, 2012

8. **Project: TECHPLAN FY09:PREPARING TRANSP**

Project Team: Frank Douma (Principal)

Status: Open

Project Dates: June 11, 2007 - February 24, 2010

9. **Project: ITS AND PRIVACY: DEVELOPING NE**

Project Team: Frank Douma (Principal)

Status: Open

Project Dates: June 11, 2007 - December 31, 2008

**Award: Identifying Issues Related to Deployment of Automated Speed Enforcement**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: April 30, 2012 - June 30, 2012

Automated Speed Enforcement can be an effective strategy for reducing road fatalities, especially in rural areas where low traffic volumes and smaller populations make human-based enforcement mechanisms inefficient, if not impossible. However, political and legal obstacles have stood in the way of implementing this safety measure. This effort focused on Minnesota as a case study. This project identified the key issues raised by the prospect of deploying automated speed enforcement in Minnesota, and sought to provide valuable information on which technologies, approaches, and requirements would be most likely to gain legislative support.

**Project: Identifying Issues Related to Deployment of Automated Speed Enforcement**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: April 30, 2012 - June 30, 2012

**Award: Assessment of Mn/DOT's Strategic Highway Research Program (SHRP2) Project C-18: Pilot Test the Collaborative Decision Making Framework**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: October 14, 2010 - June 30, 2012

MnDOT is leading a multi-jurisdictional and multi-modal collaborative effort to develop and implement a "Complete Streets" planning process in Grand Rapids, Minnesota, and to do so while pilot testing the Strategic Highway Research Program 2 (SHRP2) "Transportation for Communities: Advancing Projects through Partnerships" (TCAPP) decision guide. MnDOT designed the research methodology to utilize the TCAPP decision guide on a prospective planning issue, i.e. developing a Complete Streets planning process that better integrates community, economic, and environmental considerations into new highway capacity.

The research component of this project was to conduct the evaluation of the product as an independent and impartial team of policy and program evaluators. The evaluation team is very familiar with the transportation system in the target community for Complete Streets planning process evaluation, having completed a study of transportation needs in Itasca County, where Grand Rapids is located.

1. **Project: Assessment of Mn/DOT's Strategic Highway Research Program (SHRP2) Project C-18: Pilot Test the Collaborative Decision Making Framework**

Project Team: Frank Douma (Principal), Gina Baas (Co-Investigator)

Status: Closed

Project Dates: October 14, 2010 - June 30, 2012

Annotation: MnDOT is leading a multi-jurisdictional and multi-modal collaborative effort to develop and implement a "Complete Streets" planning process in Grand Rapids, Minnesota, and to do so while pilot testing the Strategic Highway Research Program 2 (SHRP2) "Transportation for Communities: Advancing Projects through Partnerships" (TCAPP) decision guide. MnDOT designed the research methodology to utilize the TCAPP decision guide on a prospective

planning issue, i.e. developing a Complete Streets planning process that better integrates community, economic, and environmental considerations into new highway capacity.

The research component of this project was to conduct the evaluation of the product as an independent and impartial team of policy and program evaluators. The evaluation team is very familiar with the transportation system in the target community for Complete Streets planning process evaluation, having completed a study of transportation needs in Itasca County, where Grand Rapids is located.

**2. Project: Assessment of MnDOT SHRP 2 Project C-18: Pilot Test the Collaborative Decision Making Framework**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: October 14, 2010 - June 30, 2012

**Award: Regional Competitiveness Strategy**

Principal Investigator: Munnich, Lee W.

Status: Closed

Sponsoring Organization: MN DEPT OF EMPLOYMENT & ECONOMIC DEV

Award Dates: September 3, 2009 - June 30, 2012

**Project: This project will create a new working partnership of business, government, education and community leadership dedicated toward strengthening the Twin Cities regional economic competitiveness and enhancing statewide productivity through linkages with the**

Project Team: Frank Douma, Lee Munnich (Principal)

Status: Closed

Project Dates: September 3, 2009 - June 30, 2012

**Award: Impacts of Minnesota's Primary Seat Belt Law**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: Minnesota Department of Public Safety

Award Dates: January 3, 2012 - March 28, 2012

In the spring of 2009, the Minnesota Legislature changed the state's seat belt law, making not wearing a seat belt a "primary" offense, where officers can ticket drivers for not wearing a seat belt even if no other traffic law is broken. Using data from the Minnesota Crash Records Database provided by the Department of Public Safety, the study utilized two methods of analysis, first comparing actual crash data from July 2009 - June 2011 to expected data based upon trends from July 2004 - June 2009, and second, comparing the expected post law change injury types estimated from the July 2006 - June 2009 crash data to the actual post primary crash data from July 2009 through June 2011. Results of seat belt use and public opinion surveys were also reviewed.

**Project: Impacts of Primary Seat Belt Law**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: January 3, 2012 - March 28, 2012

**Award: Innovative Parking Pricing Demonstration Project - Phase II**

Principal Investigator: Lari, Adeel Z.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: August 13, 2009 - December 31, 2011

This project examined how innovative pricing strategies can impact the mode choice of downtown commuters with monthly parking contracts. The principal goal of this research was to demonstrate an innovative pricing strategy in the Twin Cities to determine whether monthly parking contracts prevent downtown Minneapolis commuters from using transit. A secondary research objective was to determine commuter's tipping point for price acceptability in bundling flexibility into their commuting package.

The demonstration consisted of running four different test modules over the course of three four-month periods. The four test modules include a discounted transit pass option (Buying Flexibility), two forms of rebate programs (Marginal Rebate and PayGo), and a free transit pass option (Disincentive Removal). The first rebate program, Marginal Rebate, offered a rebate for the difference between the marginal parking cost and transit fare on days when transit was used. The second rebate program, PayGo, offered the same transit rebate in addition to a rebate for the full marginal parking cost on days when a mode other than parking or transit was used. Analysis of the commuting behavior among participants in this study demonstrated that the level of incentive positively correlates to the propensity for mode shift to occur, with significant and increasing mode shift in the two programs that offered the greatest flexibility and incentive. However, the data collected also indicates that a discounted or free transit pass is not enough to entice mode change.

**Project: Innovative Parking Pricing Demonstration Project - Phase II**

Project Team: Adeel Lari (Principal), Frank Douma (Co-Investigator), Adeel Lari (Principal)

Status: Closed

Project Dates: August 13, 2009 - December 31, 2011

**Award: Itasca County Area Transportation Study, Phase II**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: Blandin Foundation

Award Dates: April 15, 2011 - November 15, 2011

In 2008, the United Way of 1000 Lakes identified transportation as a key barrier in Itasca County, Minnesota. That work noted that these transportation problems most specifically impacted low income workers, students, and senior populations in Itasca County. A subsequent study by the Humphrey School identified a number of strategies to address these issues. Regarding student transportation, the study recommended a number of items, including the creation of an After School Circulator program that would extend transportation services to students after school hours. A question was raised regarding the feasibility of using school buses to provide additional transit options to all members of the general public. The Humphrey School team subsequently examined this question, finding that while such arrangements are permissible under Minnesota law, funding for such service needs to be identified and significant coordination between school districts and potential users is required. This research builds upon the findings and recommendations of both the Area

Transportation Study and follow-up work on use of school buses to enhance transportation options for students in Itasca County. Specifically, this research sought to identify options for coordination and collaboration that will yield efficiencies and opportunities to expand existing services.

**Project: Itasca County Area Transportation Study**

Project Team: Frank Douma (Principal), Yingling Fan (Co-Investigator)

Status: Closed

Project Dates: April 15, 2011 - November 15, 2011

**Award: Itasca County Area Transportation Study**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: BLANDIN FOUNDATION

Award Dates: July 1, 2009 - May 1, 2010

A team of researchers from the University of Minnesota's Humphrey Institute of Public Affairs and Center for Transportation Studies conducted a study evaluating the cost and ease of implementing a variety of options for people to travel within and outside Itasca County, Minnesota. The county presents a challenge to transportation planners, as it is the third largest in the state by land area, but one of the smallest in terms of population. To gain an understanding of the key transportation needs, researchers held a series of focus groups, listening sessions, and one-on-one interviews, and also conducted background research that included demographic analysis, mapping of the "mis-match" between the location of jobs and where the workers lived, and a national scan of best practices in providing rural transportation. This work resulted in a number of recommendations ranging from improving bike routes and awareness of public transportation, to improving bus service linking Itasca County to Duluth, and launching an online carpool service.

1. **Project: The RFP calls for environmental scans of transportation needs and best practices for addressing them, for the residents of Itasca County, with an emphasis on meeting the needs of low-income worker, student, and senior populations. The SLPP team will**

Project Team: Frank Douma (Principal), Yingling Fan, Gina Baas, Ferrol Robinson

Status: Closed

Project Dates: July 1, 2009 - May 1, 2010

2. **Project: Itasca County Area Transportat**

Project Team: Frank Douma (Principal), Gina Baas (Co-Investigator)

Status: Closed

Project Dates: July 1, 2009 - May 1, 2010

**Award: Substitution between E-shopping and Travel: Evidence from the Twin Cities-FY09 Tech Plan**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: University of Minnesota (United States Department of Transportation)

Award Dates: 2008 - Present

Significant research has been done on how information and communication technologies

(ICTs) influence where work is done and how the resulting changes affect travel. However, little work has been conducted to understand the impact of ICTs on individuals' shopping travel, especially in the United States. Further, existing empirical studies have produced inconclusive findings on the relationship between e-shopping (Internet shopping) and travel. This research examined the interactions between e-shopping and in-store shopping using a sample of Internet users in the Minneapolis-St. Paul metropolitan area. This project adopted an innovative research design by integrating a conventional shopping survey with an activity diary. Two ordered probit models and structural equation models were developed to investigate the influence of geography on online shopping usage and the influence of e-shopping on traditional shopping.

**Award: Impact of Bicycle Facilities on Commute Mode Share**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: July 17, 2006 - November 30, 2008

In a recent paper, researchers examined bicycle commuting rates in the Twin Cities in 1990 and 2000, particularly how changes in commuting rates related to the creation of new bicycle facilities. While some areas near new facilities exhibited very high bike commuting rates, the research found that this high level already existed before the facilities were built. However, the facilities did have a small but consistent and statistically significant impact. This project expanded on the previous research by applying the same methodology to a set of other cities where significant new bicycle facilities were constructed during the 1990s, to see if the results held true elsewhere and to determine reasons if they did not. This work provided much-needed evidence to aid in the evaluation of bicycle facility investment as a strategy for reducing traffic congestion. Researchers concluded that the "build it and they will come" theory is not universally applicable; contextual factors were an important element in determining the effectiveness of new commuting facilities. Among key factors the researchers identified were the level of publicity surrounding new facilities, the utility of routes to commuters, and the overall connectivity of the city's bicycling network.

**Project: IMPLACT OF BICYCLE FACILITIES**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: July 17, 2006 - November 30, 2008

**Award: Improving Car-Sharing and Transit Service with ITS**

Principal Investigator: Douma, Frank P.

Status: Closed

Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION

Award Dates: December 15, 2006 - September 30, 2008

Previous research had shown that carsharing and advanced traveler information services (ATIS) were two ITS applications that could offer significant benefits to an increasingly diverse travelling public. The focus of this project was twofold: 1) to understand if and how being a member of a car-sharing program affected travel behavior and auto ownership of its members, particularly for students at the University of Minnesota; and 2) to empirically investigate how citizen use of an e-government Web site (e.g., transit planning site) affected citizen/user trust and confidence in the related government service (e.g., the public transit system) and the

public service agency (transit authority). The results of this research aided in developing policies for a diverse population with increasingly diverse transportation needs. The data revealed that: 1) each HourCar removes 2.5 other vehicles; 2) HourCar members demonstrate an interest in deciding whether a car is their most efficient option for their trip; 3) HourCar respondents were not significantly different from the control group in terms of household size, income, age, or housing type; and 4) most members indicated convenience and financial considerations were key to joining. For the second component, a survey and focus group indicated connections between online use of a transit planning site and perceptions about the agency. Notably, a strong positive view of the trip planner was associated with trust in the agency to perform the service.

**Project: Improving Car-sharing and Transit Service with ITS**

Project Team: Frank Douma (Principal)

Status: Closed

Project Dates: December 15, 2006 - September 30, 2008

Annotation: Previous research had shown that carsharing and advanced traveler information services (ATIS) were two ITS applications that could offer significant benefits to an increasingly diverse travelling public. The focus of this project was twofold: 1) to understand if and how being a member of a car-sharing program affected travel behavior and auto ownership of its members, particularly for students at the University of Minnesota; and 2) to empirically investigate how citizen use of an e-government Web site (e.g., transit planning site) affected citizen/user trust and confidence in the related government service (e.g., the public transit system) and the public service agency (transit authority). The results of this research aided in developing policies for a diverse population with increasingly diverse transportation needs. The data revealed that: 1) each HourCar removes 2.5 other vehicles; 2) HourCar members demonstrate an interest in deciding whether a car is their most efficient option for their trip; 3) HourCar respondents were not significantly different from the control group in terms of household size, income, age, or housing type; and 4) most members indicated convenience and financial considerations were key to joining. For the second component, a survey and focus group indicated connections between online use of a transit planning site and perceptions about the agency. Notably, a strong positive view of the trip planner was associated with trust in the agency to perform the service.

**Award: Transportation Equity Act for the 21st Century (TEA 21)**

Principal Investigator: Donath, Max

Status: Closed

Sponsoring Organization: US DEPARTMENT OF TRANSPORTATION

Award Dates: June 9, 1998 - September 30, 2008

**Project: SUSTAINABLE TECH RESEARCH 99-1**

Project Team: Frank Douma (Principal)

Status: Approved

Project Dates: January 1, 2000 - July 31, 2008

**Award: Telework Synthesis Project**



Principal Investigator: Douma, Frank P.  
Status: Closed  
Sponsoring Organization: CESSI ACCESSIBLE SOLUTIONS  
Award Dates: December 15, 2007 - September 24, 2008

**Project: TELEWORK SYNTHESIS PROJECT**

Project Team: Frank Douma (Principal)  
Status: Closed  
Project Dates: December 15, 2007 - September 24, 2008

**Award: The Implications of Current and Emerging Privacy Law for ITS - FY08 TechPlan**

Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: University of Minnesota (United States Department of Transportation)  
Award Dates: 2007 - Present

As Intelligent Transportation Systems (ITS) incorporate the gathering and compilation of data into the transportation infrastructure, questions about privacy implications, stemming from the potential misallocation or abuse of collected data, have arisen. As the United States has no comprehensive national regulatory structure for privacy, answers to these questions can only be found by considering a variety of sources of federal and state privacy law. In this project, researchers investigated federal and state privacy law as applied to modern technology and transportation systems. They focused on the legal status of various ITS technologies, particularly traffic management and in-vehicle applications, and addressed privacy with respect to both government entities, such as law enforcement, and private entities, such as insurance companies. Research was conducted with the intent to help ITS developers and providers construct and deploy ITS technologies that avoid or survive legal challenges, and that comply with public expectations of privacy; it may also help legal professionals and public policymakers update privacy law and account for the development of ITS technologies. The researchers also created a toolbox to help ITS developers and providers understand when privacy issues arise and identify opportunities to mitigate these risks.

**Award: Telework/Telecommuting Pilot Research**

Principal Investigator: Douma, Frank P.  
Status: Closed  
Sponsoring Organization: MIDWEST INSTITUTE FOR TELECOMM  
Award Dates: October 1, 2004 - December 31, 2007

**Project: TELEWORK/TELECOMMUTING PILOT R**

Project Team: Frank Douma (Principal)  
Status: Closed  
Project Dates: October 1, 2004 - December 31, 2007

**Award: Examining the Success of Bus Only Shoulder Lanes**

Project Investigators: Douma, Frank Peter  
Status: Funded  
Sponsoring Organization: Hennepin County  
Award Dates: 2006 - Present

As part of continuing efforts to make travel time via public transit competitive with travel time via single-occupant automobile, buses in the Minneapolis-St. Paul metropolitan area are allowed to travel on selected freeway shoulders to bypass congested segments. While other metropolitan areas have also implemented these types of programs, the Twin Cities program was among the first and the most successful, with more miles of these "bus-only shoulder lanes" than any other metropolitan area in the United States. Using an integrated framework for analyzing transportation corridor development that evaluates five aspects of a corridor (citizen preferences, governance, financing, economic effects, and design) the researchers undertook an in-depth documentation of how and why bus-only shoulder lanes began and the reasons underlying their success in the Twin Cities. Key elements contributing to this success included an innovative culture at both the transit provider and the Department of Transportation, supported by top management; passage of a state statute authorizing the creation and use of these facilities; and creation of a dedicated staff position at the DOT to oversee the maintenance and expansion of the system.

**Award: Impact of Bicycle Facilities on Commute Mode Share**

Project Investigators: Douma, Frank Peter

Sponsoring Organization: Minnesota Department of Transportation

Award Dates: 2006

In a recent paper, researchers examined bicycle commuting rates in the Twin Cities in 1990 and 2000, particularly how changes in commuting rates related to the creation of new bicycle facilities. While some areas near new facilities exhibited very high bike commuting rates, the research found that this high level already existed before the facilities were built. However, the facilities did have a small but consistent and statistically significant impact. This project expanded on the previous research by applying the same methodology to a set of other cities where significant new bicycle facilities were constructed during the 1990s, to see if the results held true elsewhere and to determine reasons if they did not. This work provided much-needed evidence to aid in the evaluation of bicycle facility investment as a strategy for reducing traffic congestion. Researchers concluded that the "build it and they will come" theory is not universally applicable; contextual factors were an important element in determining the effectiveness of new commuting facilities. Among key factors the researchers identified were the level of publicity surrounding new facilities, the utility of routes to commuters, and the overall connectivity of the city's bicycling network.

**Award: Developing ITS to Serve Diverse Populations**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: Minnesota Department of Transportation

Award Dates: 2004 - Present

The objective of this research continued to examine the nature of the gap between the emerging needs of an increasingly diverse travelling public and existing transportation services, and to propose ways of using technology to bridge the gap, both in terms of providing better transportation options and in reducing the cost of these options. Through a series of analyses, the study found that technologically advanced Community-Based Transit, Car Sharing, using ITS to implement Value Pricing through conversion of a High-Occupancy Vehicle (HOV) lane to a High-Occupancy/Toll (HOT) lane, and Web-based Advanced Traveler Information Systems were promising Intelligent Transportation Systems (ITS) applications.

**Award: Telework as a Return to Work Strategy**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: United States Department of Labor

Award Dates: 2004 - Present

The primary goal of this project was to identify and describe the key elements of telework, including types and numbers of jobs as well as characteristics of jobs, employees, and work environments, which are necessary if telework is to be an effective strategy for returning persons with disabilities to the workforce. This goal was accomplished primarily through a literature review and national survey, and testing in two pilot projects. The pilot project sites were located in the Midwest but represented vastly different geographic regions: the Twin Cities of Minneapolis and St. Paul, Minnesota, and west-central Wisconsin. The Twin Cities is a large urban location with over 3 million residents. St. Paul is the state capital, the central core of all government departments, and the region has a broad range of employers encompassing the fields of technology, medical, manufacturing, insurance, and financial services. West central Wisconsin, on the other hand, represents a rural area with towns ranging from 1,000 to 50,000 in population. This area includes public sector workers, employees of federal government divisions, and state and county public workers who are widely dispersed.

**Award: In-Depth Examination of Urban Corridor Development**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: Hennepin County, Minnesota

Award Dates: 2003 - Present

This project examined case studies of urban transportation corridors that are examples of best practices in one or more of the following areas: citizen preferences, governance, financing, economic affects, and design. This work led to the creation of a "decision model" that could be used by corridor planners as a guide in their effort to identify and develop new corridors. The decision model was enhanced by an understanding of the underlying principles of corridor development, and lessons learned were tailored for use by corridor planning professionals.

**Award: Using ITS to Better Serve Diverse Populations**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: Minnesota Department of Transportation

Award Dates: 2003 - Present

This project investigated ways Intelligent Transportation Systems (ITS) can be used to serve an increasingly diverse travelling public, in terms of travel behavior, age, and abilities. A substantial portion will not be able to drive themselves due to age (both old and young), disability, or poverty, among other reasons. But even among people who drive, an increasing number will not fit the traditional definition of a traveler; for example, they might have very long commutes to work, they may choose to not drive for environmental reasons, or they might drive long distances on a regular basis for recreation or other purposes. The study found that populations not traditionally addressed in the transportation planning process that could most benefit from these applications are senior citizens, immigrant and non-English-speaking populations, and the disabled, and a combination of surveys and focus groups revealed that combining community-based transit (CBT), carsharing, telework and telemedicine,

and advanced traveler information services (ATIS), could create the greatest benefits.

**Award: Telecommunications and Sustainable Transportation**

Project Investigators: Douma, Frank Peter

Status: Funded

Sponsoring Organization: Minnesota Department of Transportation

Award Dates: 2001 - Present

This research investigated how advances in telecommunications-based technologies could aid in making transportation more sustainable. The first task examined the effect of telecommunications on work and shopping trips. The second task focused on how community-based transit could be improved through new technology. The third task considered how wireless telecommunications, particularly e-911 services, could improve transportation system safety in rural areas. These efforts found that advances in these technologies and in broadband telecommunications may lead to increased travel, which demonstrates a need for increased collaboration between telecommunication and transportation infrastructure planning.

**Pending/Submitted:**

**Proposal: Impact of Decline in Volunteerism on Rural Transit System**

Role: Principal

Proposal ID: CON000000082832

Status: In Process

Sponsoring Organization: AECOM, INC

Date Submitted: September 20, 2019

Requested Amount:

Anticipated Direct Amount:

Percent Effort:

Purpose: Other Sponsored Activity

**Proposal: White Bear Lake Shuttle Pilot**

Role: Principal

Proposal ID: CON000000083040

Status: Submitted

Sponsoring Organization: CITY OF WHITE BEAR LAKE

Date Submitted: October 2, 2019

Requested Amount:

Anticipated Direct Amount:

Percent Effort:

Purpose: Other Sponsored Activity

**Proposal: SCC-PG: Equipping Local Government in Providing Equitable**

Role: Co-Investigator

Proposal ID: CON000000082612

Status: Submitted

Sponsoring Organization: THE NATIONAL SCIENCE FOUNDATION

Date Submitted: September 6, 2019

Requested Amount:

Anticipated Direct Amount:

Percent Effort:

Purpose: Research

**Proposal: Understanding Manufacturers' Perspectives on Transportat**

Role: Co-Investigator  
Proposal ID: CON000000081846  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: July 17, 2019  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: State: Minnesota Distance Based User Fee Demonstration**

Role: Principal  
Proposal ID: CON000000080979  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: June 3, 2019  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: Bringing a Gender-based Lens to CAV Planning and Develop**

Role: Principal  
Proposal ID: CON000000080630  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: May 15, 2019  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: State and Local Impacts of Automated Freight Transportat**

Role: Principal  
Proposal ID: CON000000080606  
Status: Submitted  
Sponsoring Organization: QUETICA, LLC  
Date Submitted: May 14, 2019  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: Safety and Equity through Automated Transportation Syste**

Role: Co-Investigator  
Proposal ID: CON000000079444  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: March 14, 2019

Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Research

**Proposal: Technical Support for Highway Policy Analysis for FHWA O**

Role: Principal  
Proposal ID: CON000000076260  
Status: Submitted  
Sponsoring Organization: CAMBRIDGE SYSTEMATICS, INC  
Date Submitted: September 12, 2018  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: FEDERAL SUPPORT: Distance Based User Fee Demonstration**

Role: Principal  
Proposal ID: CON000000075228  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: July 10, 2018  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Proposal: MNDOT SUPPORT: Distance Based User Fee Demonstration**

Role: Principal  
Proposal ID: CON000000075229  
Status: Submitted  
Sponsoring Organization: MN DEPARTMENT OF TRANSPORTATION  
Date Submitted: July 10, 2018  
Requested Amount:  
Anticipated Direct Amount:  
Percent Effort:  
Purpose: Other Sponsored Activity

**Publications**

*Asterisk(\*) - indicates student author*

***Peer-Reviewed Journal Article***

Hauf, A., & Douma, F. (2019). Governing Dockless Bike Share: Early Lessons for Nice Ride Minnesota. *Transportation Research Record*, 2673(9), 419--429.

Douma, F., & Petersen, E. (2019). Scenarios and Justification for Automated Vehicle Demonstration in Rural Minnesota. *Center for Transportation Studies, University of Minnesota*.

Douma, F., Cao, J., Corcoran, H., Fan, Y., Lari, A., Rohde, B., . . . Karner, K. (2019). The ABC Parking Ramps in Minneapolis: A Unique Past. A Visionary Future. *Minnesota Department of Transportation*.

- Douma, F., & Alarcon, F.** Toward Greater Understanding of the Relationship between Public Perceptions of Speed, Speed Laws, and Safety. *Journal of Transportation Law, Logistics and Policy*. [Accepted]
- Douma, F., & Alarcon, F. (2018). Toward Greater Understanding of the Relationship between Public Perceptions of Speed, Speed Laws, and Safety. *Center for Transportation Studies, University of Minnesota*.
- Peterson, C., **Douma, F.**, & Morris, N. (2017). Addressing key concerns regarding automated speed enforcement via interactive survey. *Transportation Research Record: Journal of the Transportation Research Board*(2660), 66--73.
- Munnich, L., & **Douma, F.** (2017). Obtaining manufacturers' perspectives in making regional transportation decisions. *Community Development*, 48(2), 240--254.
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- Stanley, K. D., Partridge, E., & **Douma, F.** (2015). Legal Accelerators and Brakes for Deployment of Automated Vehicles. *Springer, Cham*, 93--104.
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- Peck, S., Fatehi, L., **Douma, F.**, & Lari, A. (2015). The SDVs Are Coming! An Examination of Minnesota Laws in Preparation for Self-Driving Vehicles. *Minn. JL Sci. & Tech.*, 16, 843.
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- Lari, A., **Douma, F.**, Yang, K. L., Caskey, K., & Cureton, C. (2014). Innovative Parking Pricing Demonstration in the Twin Cities: Introducing Flexibility and Incentives to Parking Contracts. *Center for Transportation Studies, University of Minnesota*.
- Douma, F.**, Munnich, L., & Garry, T. (2014). Options for automated speed enforcement pilot projects in Minnesota work and school zones. *Center for Transportation Studies, University of Minnesota*.
- Lari, A., **Douma, F.**, & Onyiah, I. (2014). Self-driving vehicles: current status of autonomous vehicle development and Minnesota policy implications. *Preliminary white paper, University of Minnesota*, 1--20.

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- Douma, F.**, & Garry, T. (2013). NEMT Coordinators in Minnesota.
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- Douma, F.**, & Garry, T. (2013). Vehicle Sharing Among Human Service Providers in Minnesota: Steps to Address Barriers.
- Douma, F.**, & Palodichuk, S. A. (2012). Criminal liability issues created by autonomous vehicles. *Santa Clara L. Rev.*, 52, 1157.
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- Cao, X. J., Xu, Z., & **Douma, F.** (2012). The interactions between e-shopping and traditional in-store shopping: an application of structural equations model. *Transportation*, 39(5), 957--974.
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- Munnich, L., **Douma, F.**, & others (2008). Places and Networks: The Changing Landscape of Transportation and Technology. *Center for Transportation Studies, University of Minnesota*.
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### **Book Chapter**

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- Nguyen, N., Munnich, L., & **Douma, F.** (2015). Closing the Gap in Rural and Urban Road Deaths. In D. Hughes (Ed.), *Transportation Issues, Policies and R&D: Road and Traffic Safety: Practices, Role of Human Behavior and Effective Programs* (vol. 4, pp. 1-22). New York Chapter: Nova Science Publishers.

### **Law Review**

- Douma, F.,** Lari, A., & Andersen, K. (2017)., *The Legal Obligations, Obstacles, and Opportunities for Automated and Connected Vehicles to Improve Mobility and Access for People Unable to Drive* (1st ed., vol. 2017, pp. 75). Michigan State Law Review.
- Douma, F.,** & Hedblom, M. K. (2001)., *Wireless Communication Applications for Transportation: User Boon or Booby Trap?* (4th ed., vol. 27, pp. 6). William Mitchell Law Review.
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- Douma, F.,** & Kriz, K. A. (2003)., *Transportation Corridor Planning: a Model and Case studies*. [Online] Humphrey School of public affairs, University of Minnesota Available at: <http://www.hhh.umn.edu/img/assets/8460/CBPTRBpaperFinalr2.pdf> [Accessed in August, 2012].

### **Case Review**

- Douma, F.,** & Hauf, A. (2018)., *Governing Dockless Bike Share: Early Lessons for Nice Ride Minnesota*. Center for Transportation Studies, University of Minnesota.  
<http://www.cts.umn.edu/Research/ProjectDetail.html?id=2019023>

### **Conference Proceeding**

- Nguyen, N. P., Munnich, L. W., & **Douma, F.** (2014). Closing the Gap in Rural and Urban Road Deaths., *Transportation Research Board 93rd Annual Meeting* (14-3917 ed.).
- Fan, Y., Chen, Q., Liao, C.-F., & **Douma, F.** (2013). UbiActive: A smartphone-based tool for trip detection and travel-related physical activity assessment., *TRB 92nd Annual Meeting Compendium of Papers, Transportation Research Board, TRB 2013 Annual Meeting*.
- Douma, F.,** & Gaug, R. (2009). Carsharing in the Twin Cities: Measuring impacts on travel behavior and automobile ownership., *Transportation Research Board 88th Annual Meeting* (09-0446 ed.).
- Cleaveland, F., & **Douma, F.** (2009). The impact of bicycling facilities on commute mode share., *88th Annual Meeting of the Transportation Research Board, Washington, DC*.
- Douma, F.,** Frooman, S., & Deckenbach, J. (2008). What You Need to Know--and Not Know: Current and Emerging Privacy Law for Intelligent Transportation Systems., *Transportation Research Board 87th Annual Meeting* (08-1857 ed.).
- Zmud, J., Bradley, M., **Douma, F.,** & Simek, C. (2007). Panel Survey Evaluation of Attitudes and Willingness to Pay for Tolled Facilities., *Transportation Research Board Annual Meeting*.
- Zmud, J. P., Peterson, S., & **Douma, F.** (2007). Preliminary Before and After Results of I-394 HOT Lane Panel Survey., *Transportation Research Board 86th Annual Meeting* (07-0048 ed.).
- Douma, F.,** & Andrew, J. (2006). Developing a Model for Car Sharing Potential in Twin Cities Neighborhoods., *Transportation Research Board 85th Annual Meeting* (06-2449 ed.).
- Andrew, J., & **Douma, F.** (2006). Developing a model for carsharing potential in Twin Cities neighbourhoods., *Compendium of Papers for the 85th Annual Meeting of the Transportation Research Board, Washington DC, January* (pp. 22--26).
- Zmud, J. P., **Douma, F.,** & Patterson, T. (2006). Pricing Comes to Minnesota: Baseline Attitudinal Evaluation of the I-394 HOT Lane Project., *Transportation Research Board 85th Annual Meeting* (06-2486 ed.).
- Douma, F.,** & Wilson, S. (2006). Transportation Needs of Foreign-Born Ethnic Subpopulations

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**Douma, F.**, Wells, K., Horan, T. A., & Krizek, K. J. (2004). ICT and travel in the twin cities metropolitan area: enacted patterns between Internet use and working and shopping trips., *Proceedings CD-ROM of the 83rd Annual Meeting of the Transportation Research Board, Washington DC*.

Hedblom, M. K., & **Douma, F.** (2004). ITS OPPORTUNITIES RESULTING FROM DEVELOPMENTS IN HOME BROADBAND TELECOMMUNICATIONS., *At the Crossroads: Integrating Mobility Safety and Security. ITS America 2004, 14th Annual Meeting and Exposition ITS America*.

**Douma, F.**, Wells, K., Horan, T., & Krizek, K. (2003). ICT and travel in the twin cities Metropolitan area: enacted patterns between internet use and working and shopping trips., *The Proceedings of the 83rd Annual Meeting of the Transportation Research Board (CD-ROM) in Washington DC*.

**Douma, F.**, Hedblom, M. K., & Dadabayeva, N. (2002). REGULATION OF SAFETY AND PRIVACY ISSUES IN WIRELESS COMMUNICATION APPLICATIONS FOR TRANSPORTATION., *ITS America 12th Annual Meeting and Exposition: Securing Our Future*.

### **Technical Report**

Wu, X., Douma, F., & Cao, J. (2019)., *Challenges and Opportunities of Autonomous Vehicles to Urban Planning: Investigation into Transit and Parking*.

Noble, C., & Douma, F. (2018)., *Best Practices for Addressing Youth Employment and Training Transportation*. Minnesota Council on Transportation Access.  
<http://cts.umn.edu/Publications/ResearchReports/pdfdownload.pl?id=2922>

Peterson, C., **Douma, F.**, & Morris, N. (2017)., *Identifying and Reconciling Stakeholder Perspectives in Deploying Automated Speed Enforcement*. Center for Transportation Studies, University of Minnesota.

Lari, A., **Douma, F.**, Caskey, K., Yang, K. L., & Cureton, C. (2012)., *Innovative Parking Pricing Demonstration: Introducing Flexibility and Incentives to Parking Contracts*.

### **Webinar**

Douma, F. P. (2017)., *Policy and Planning Opportunities of Self-Driving Vehicles*.

### **Presentations, Posters, and Exhibits**

*Asterisk(\*) - indicates student co-presenter*

#### **Keynote/Plenary Address**

**Douma, F.** "Transportation Sharing: Market-Based Policy Change," Minnesota Higher Education Bike Forum: Micro-Mobility in Minnesota University of Minnesota, Minneapolis, Minnesota, United States. (January 15, 2019). *Invited*.

Handy, S., (Keynote/Plenary Speaker), **Douma, F. P.**, (Panelist), Erkel, J., (Panelist), Monson, K., (Panelist), Sexton, T., (Panelist) "The Future of Driving in the Land of Freeways,". (November 1, 2018). *Invited*.

### ***Closing remarks***

**Douma, F. P.** "Closing remarks at "Minnesota's Stake in Plug-in Hybrid Electric Vehicles",", St. Paul, Minnesota. (January 18, 2007). *Invited.*

### ***Demonstration***

Lari, A., **Douma, F. P.** "Policy Implications for Self-Driving Vehicles," St. Cloud Area Planning Organization, Waite Park, Minnesota. (May 10, 2018). *Invited.*

URL: <http://www.stcloudapo.org/policy-board.html>

Audience size: 15

Describe the audience: local officials, planning commissioners, members of the public

**Douma, F.** "Demonstration of EZ-10 Autonomous Shuttle," University of Minnesota, MnDOT, First Transit, Minneapolis. (April 30, 2018).

**Douma, F. P.** "Policy Implications of Self-Driving Vehicles," League of Minnesota Cities Improving Local Economies Policy Committee meeting, St. Paul, Minnesota. (August 2017). *Invited.*

URL: <https://www.lmc.org/page/1/improving-local-economies.jsp>

Audience size: 30

Describe the audience: High level city staff and elected officials

**Douma, F. P.** "Self-Driving Vehicles - Legal and Insurance Issues," Regional Council of Mayors, Minneapolis, Minnesota. (December 12, 2016). *Invited.*

URL: [http://minnesota.uli.org/wp-content/uploads/sites/31/2016/12/RCM\\_2016.12.12.pdf](http://minnesota.uli.org/wp-content/uploads/sites/31/2016/12/RCM_2016.12.12.pdf)

Audience size: 35

Describe the audience: Twin Cities Metro Area mayors and staff

### ***Didactic Seminar***

**Douma, F. P.** "Transportation Sharing: Market-Based Policy Change," Research Workshop on the Sharing Economy University of Minnesota, Minneapolis, Minnesota, United States. (November 3, 2017). *Invited.*

URL: <http://sharingeconomy.umn.edu/events/workshop/2017/index.html>

Audience size: 50

Describe the audience: academic

### ***Funding workshop***

**Douma, F. P.** "Automated Vehicles and Transportation Finance: A "Choose Your Own Adventure" Discussion," Minnesota Transportation Funding Workshop Minnesota Transportation Alliance, St. Paul, Minnesota. (September 11, 2018). *Invited.*

Audience size: 70

Describe the audience: Transportation funding stakeholders and decision makers

### ***Lecture***

**Douma, F. P.** "Policy Implications for Self-Driving Vehicles," Grinnell Mutual Insurance, Grinnell, Iowa. (April 24, 2018). *Invited.*

Audience size: 85

Describe the audience: Insurance professionals

**Douma, F. P.** "Policy Implications for Self-Driving Vehicles," White Bear Lake Chamber of Commerce, Maplewood, Minnesota. (January 16, 2018). *Invited.*

Audience size: 80

Describe the audience: Chamber of Commerce members, Legislators

**Douma, F. P.** "Policy Implications of Self-Driving Vehicles," La Rive Condominium Lecture Series, Minneapolis, Minnesota. (March 10, 2017). *Invited.*

Audience size: 25  
Describe the audience: Academics, politicians, interested citizens

### **Luncheon**

**Douma, F. P.** "Autonomous Vehicles," White Bear Area Chamber of Commerce White Bear Area Chamber of Commerce, White Bear Lake, Minnesota. (August 1, 2018). *Invited*.

URL: [http://www.presspubs.com/white\\_bear/news/article\\_554d41ca-9b21-11e8-b0f5-575ef694cfa1.html](http://www.presspubs.com/white_bear/news/article_554d41ca-9b21-11e8-b0f5-575ef694cfa1.html)

Audience size: 20  
Describe the audience: Local business leaders

### **Luncheon Presentation**

**Douma, F. P.,** Lari, A. "Policy Implications of Self-Driving Vehicles," BOMA September General Meeting. (September 21, 2017). *Invited*.

URL: <http://www.bomampls.org/education-events/calendar/september-general-meeting/>

Audience size: 50  
Describe the audience: Building Owners and Managers of Minneapolis

### **Podium**

**Douma, F. P., (Presenter)** "Policy and Legal Opportunities and Obstacles for Connected and Automated Vehicles: Lessons from South of the Border?," Vehicle Technology International Conference Red River College, Winnipeg, Canada. (October 1, 2019). *Invited*.

URL: <https://www.rrc.ca/ar/2019/10/10/vehicle-technology-international-conference-presentations-available-for-download/>

A policy level discussion of the obstacles and opportunities related to development and deployment of connected and automated vehicles.

**Douma, F. P., (Presenter)** "Legal and Policy Issues in Transportation Data Privacy," Conference on Wireless Communications in Transit Global Mass Transit, Washington, District of Columbia, United States. (June 18, 2019). *Invited*.

URL: <https://www.globalmasstransit.net/archive.php?id=34753>

Provided a synopsis of the evolving state of legal regulation of data privacy in transportation

**Douma, F. P., (Author & Presenter),** Dame, R., (Author & Presenter)\* "ABC Parking Ramps: Reimagining the Future of Parking and Multimodal Transportation Choices," University of Minnesota Center for Transportation Studies Annual Research Conference University of Minnesota Center for Transportation Studies, Minneapolis, Minnesota, United States. (November 1, 2018). *Invited*.

URL: <http://www.cts.umn.edu/events/conference/2018>

**Douma, F. P.** "How Planning for Self-Driving Vehicle Technology Can Help All People," 2017 Fall Forum ITS Minnesota, Bloomington, Minnesota, United States. (October 17, 2017). *Invited*.

URL: <http://www.itsmn.org/events/2017/8/7/j961111xklueac5b12rhixjzr5r0ge>

Audience size: 100  
Describe the audience: Transportation Professionals

**Douma, F. P.** "Minnesota User Based Fee Demonstration: Pre-Implementation Plan," Automated Vehicle Symposium AUVSI and TRB, San Francisco, California, United States. (July 12, 2017). *Invited*.

URL: <http://www.automatedvehiclessymposium.org/program/proceedings>

**Douma, F., (Moderator),** Fisher, T. R., (Author & Presenter), Eddy, J., (Speaker) "Driverless Cars, Compelling Impacts," Minnesota's Transportation Conference Minnesota Department of Transportation, St Paul, Minnesota, United States. (March 1, 2017). *Invited*.

URL: <http://mntransportationconference.org/program/>

Audience size: 150

Describe the audience: Transportation practitioners

Peterson, C., (Author & Presenter)\*, **Douma, F. P., (Author)**, Morris, N., (Author) "Addressing Key Concerns Regarding Automated Speed Enforcement via Interactive Survey," Annual Meeting Transportation Research Board, Washington, District of Columbia, United States. (January 11, 2017).

### *Poster*

Munnich, L., **Douma, F. P.**, et. al. "Evaluating Effectiveness of States' Toward-Zero-Deaths Programs," 92nd Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 14, 2013).

Lari, A., **Douma, F. P.**, Lang Yang, K.\*, Caskey, K.\*, Cureton, C.\* "Innovative Parking Pricing Demonstration: Introducing Flexibility and Incentives to Parking Contracts," 91st Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 23, 2012).

Lari, A., **Douma, F. P.**, Lang Yang, K.\*, Caskey, K.\* "Parking Pricing," 90th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 25, 2011).

**Douma, F. P.**, Cleaveland, F.\* "Impact of Bicycling Facilities on Commute Mode Share," 88th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2009).

**Douma, F. P.**, Frooman, S.\*, Deckenbach, J.\* "What You Need to Know and Not Know: Current and Engaging Privacy Law for Intelligent Transportation Systems," 87th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2008).

**Douma, F. P.**, Peterson, S.\*, Zmud, J. "Before and After Results of I-394 HOT Lane Panel Survey," 86th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2007).

**Douma, F. P.**, Andrew, J.\* "Developing a Model for Carsharing in Twin Cities Neighborhoods," 85th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2006).

**Douma, F. P.**, Patterson, T.\* "Pricing Comes to Minnesota: Baseline Attitudinal Evaluation of I-394 HOT Lane Project," 85th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2006).

**Douma, F. P.**, Wilson, S.\* "Transportation Needs of Foreign-born Ethnic Subpopulations in Rural and Urban Communities: an Environmental Justice Perspective," 85th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2006).

**Douma, F. P.** "Guidestar 2001 Survey and Diary," 83rd Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2004).

**Douma, F. P.**, Kriz, K. "Planning for Multi-Modal Transportation Corridors: Developing a Best Practices Framework," 83rd Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2004).

### *Presentation to State Senate Committee*

**Douma, F.** "A Look at Future Transportation Technology and Policy," Minnesota State Senate Transportation Committee Minnesota State Senate, St Paul, Minnesota, United States. (January 2004).

16, 2019). *Invited.*

URL: [http://mnsenate.granicus.com/player/clip/3107?view\\_id=1](http://mnsenate.granicus.com/player/clip/3107?view_id=1)

Presentation to State Senate Committee regarding changes in transportation technologies and what it means for transportation policy, financy and related items.

### **Presentation/Talk**

**Douma, F. P.** "The Future of Transportation: How Can Policy Help Ensure Everyone Benefits?," HUP Brown Bag Hennepin University Partnership, Minneapolis, Minnesota, United States. (September 5, 2019). *Invited.*

**Douma, F. P., (Keynote/Plenary Speaker)** "The Future of the Commute," Monthly Education Event 3M Bicycle User Group, Maplewood, Minnesota, United States. (July 31, 2019). *Invited.*  
A discussion of how changes in transportation technologies will impact other modes, including bicycles

**Douma, F. P., (Panelist)** "National and State Data Privacy," Twin Cities Shared Mobility Data Seminar and Workshop Twin Cities Shared Mobility Collaborative, Minneapolis, Minnesota, United States. (July 11, 2019). *Invited.*

URL:

<https://static1.squarespace.com/static/5d8a78b7362c255660b38364/t/5dd2d3862e1e1821e3259938/1574097867593/SMCdatasummary.pdf>

A discussion of the status of regulations surrounding data privacy in the United States, including risks to data collection and sharing broadly

**Douma, F. P., (Author & Presenter)** "The Future of the Commute (and more!)," 2019 Spring Corporate Bike Forum Bicycle Alliance of Minnesota, St Paul, Minnesota, United States. (May 22, 2019). *Invited.*

URL: <http://www.bikemn.org/component/events/event/778>

Presentation discussing how changes in transportation technology will impact parking, bicycle safety and related issues

**Douma, F. P., (Speaker)** "Sample of University of Minnesota Transportation Research," Energy Efficiency Innovation Seminar Series German American Chamber of Commerce, Minneapolis, Minnesota, United States. (November 5, 2018). *Invited.*

URL: <http://www.cts.umn.edu/publications/catalyst/2018/december/german>

**Douma, F. P.** "Implications of Automated and Connected Vehicles," Minnesota Metropolitan Planning Organization Annual Conference Minnesota Metropolitan Planning Organization, Minnesota. (August 9, 2018). *Invited.*

Audience Size: 15

Describe the audience: MPO Planners

**Douma, F. P.** "Findings from Research," Parking and Mode Shift in Minneapolis MnDOT, Minneapolis, Minnesota. (August 6, 2018).

URL: <http://www.cts.umn.edu/publications/catalyst/2018/september/abc>

Audience size: 85

Describe the audience: Transportation practitioners, researchers and students

**Douma, F. P., Lari, A.** "Policy Implications of Self-Driving Vehicles," West Central Initiative Fund Economic Development Committee, Fergus Falls, Minnesota. (July 9, 2018).

Audience size: 20

Describe the audience: West Central Initiative Fund Economic Development Committee

**Douma, F. P., Dossett, B.** "The Future of Transportation: It's Probably Not What You Think," MnDOT Managers Conference MnDOT, St. Cloud, Minnesota. (June 19, 2018). *Invited.*

Audience size: 120

Describe the audience: MnDOT Managers

- Douma, F.** "Volunteer Driver Programs in Minnesota: Benefits and Barriers," 2018 Minnesota Volunteer Driver Program Forum Minnesota Council on Transportation Access, St Paul, Minnesota, United States. (May 9, 2018). *Invited*.  
URL: <http://www.coordinatemntransit.org/events/volunteerdriverforum/>
- Douma, F. P.,** Lari, A. "Policy Implications for Self-Driving Vehicles," Region 9 Development Commission, Mankato, Minnesota. (April 11, 2018).  
Audience size: 40  
Describe the audience: local officials, planning commissioners, members of the public
- Douma, F. P.** "Examining the Relationship Between Speed Enforcement Laws and Safety," Traffic Engineering Organization MnDOT, Arden Hills, Minnesota, United States. (March 27, 2018). *Invited*.
- Douma, F. P.** "Policy Implications of Self Driving Vehicles," General Meeting Minneapolis Building Owners and Managers Association, Minneapolis, Minnesota, United States. (September 21, 2017). *Invited*.  
URL: <http://www.bomampls.org/education-events/calendar/september-general-meeting/>
- Douma, F.** "Policy Implications of Self Driving Vehicles," Improving Local Economies Policy Committee League of Minnesota Cities, St Paul, Minnesota, United States. (August 2017). *Invited*.  
URL: <https://www.lmc.org/page/1/improving-local-economies.jsp>
- Douma, F.,** Andersen, K.\* "Policy Implications of Self Driving Vehicles," Noon Lunch Forum St Paul Community, St Paul, Minnesota, United States. (April 14, 2017). *Invited*.
- Douma, F.** "Self-Driving Vehicles: Equity Issues," Monthly Meeting Minnesota Council on Transportation Access, St Paul, Minnesota. (March 22, 2017). *Invited*.  
Audience size: 15  
Describe the audience: government agency representatives
- Douma, F., (Presenter),** Lari, A., (Other) "Broadband Needs for Transportation," Task Force Meeting Governor's Broadband Task Force, St Paul, Minnesota, United States. (March 22, 2017). *Invited*.  
URL: <https://mn.gov/deed/programs-services/broadband/task-force/>  
Audience size: 20  
Describe the audience: Government officials and trade representatives
- Douma, F. P.** "The US Starts the MBUF Engine," MBUFA Annual Conference, Washington, District of Columbia. (March 16, 2017).  
Audience size: 50  
Describe the audience: Practitioners, consultants and academics
- Douma, F. P., (Speaker),** Andersen, K., (Speaker)\* "Driverless Revolution: Will Self-Driving Cars Reshape Our Cities?," Urban Currents The Cunningham Group, Minneapolis, Minnesota, United States. (February 21, 2017). *Invited*.  
URL: <http://www.cunningham.com/category/urban-currents/>  
Audience size: 30  
Describe the audience: architects, planners and interested citizens
- Douma, F. P.** "Changing Transit for a Changing Population in Greater Minnesota," MnDOT Transit Conference, St. Cloud, Minnesota. (June 14, 2016). *Invited*.
- Douma, F. P.** "Self-Driving Vehicles: Opportunities for Equality in Access," 9th University Transportation Center (UTC) Spotlight Conference: Connected and Automated Vehicles,



- Washington, District of Columbia. (November 4, 2015).
- Douma, F. P.** "Minnesota's Transportation Challenges," Osher Lifelong Learning Institute, Golden Valley, Minnesota. (October 12, 2015). *Invited.*
- Douma, F. P.** "The Importance of Freight Transportation to Minnesota's Economy," Golden Valley, Minnesota. (October 12, 2015). *Invited.*
- Douma, F. P.** "Self-Driving Vehicles: Opportunities for Transportation Policy and Planning," Minnesota Congressional Staff, Minneapolis, Minnesota. (October 8, 2015). *Invited.*
- Douma, F. P.** "Transportation Policy," Goodwill Easter Seals Luncheon series, St. Paul, Minnesota. (April 20, 2015). *Invited.*
- Douma, F. P.** "Self-Driving Vehicles: Opportunities for Minnesota Policy and Law," Minnesota's Transportation Conference, Bloomington, Minnesota. (March 2015).
- Douma, F. P.** "Minnesota Innovative Parking Pricing Demonstration," Contemporary Tools and Approaches for Parking Pricing and Management Workshop, Minneapolis, Minnesota. (March 6, 2015). *Invited.*
- Douma, F. P.** "Is Privacy Still the Boogeyman? The Safeguards Being Considered and Debated," MBUFA Second Annual National Conference, Washington, District of Columbia. (February 24, 2015). *Invited.*
- Douma, F. P.** "Self-Driving Vehicles: Opportunities for Minnesota Policy and Law," City Engineers Association of Minnesota 2015 Annual Conference, Brooklyn Park, Minnesota. (January 29, 2015). *Invited.*
- Douma, F. P.,** Lari, A. "Self-Driving Vehicles: Current Status and Policy Implications for Minnesota," MnDOT Traffic Topics, Roseville, Minnesota. (November 17, 2014). *Invited.*
- Douma, F. P.** "Self-Driving Vehicles: Opportunities and Challenges for Minnesota," ITS Minnesota Fall Forum, St. Paul, Minnesota. (October 21, 2014).
- Fan, Y., Chen, Q., Liao, C.-F., **Douma, F. P.** "UbiActive: Smartphone-Based Tool for Trip Detection and Travel-Related Physical Activity Assessment," 92nd Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 15, 2013).
- Douma, F. P.** "The Road to Self-Driving Cars," 2012 RoboBusiness Leadership Summit, Pittsburgh, Pennsylvania. (October 23, 2012). *Invited.*
- Douma, F. P.** "Identifying Issues Related to Deployment of Automated Speed Enforcement," Minnesota Towards Zero Deaths Conference, Bloomington, Minnesota. (October 22, 2012).
- Douma, F. P.** "Minnesota's Primary Seat Belt Saves Lives and Money," Minnesota Towards Zero Deaths Conference, Bloomington, Minnesota. (October 22, 2012).
- Douma, F. P.** "Identifying Issues Related to Deployment of Automatic Speed Enforcement in Minnesota," Minnesota Work Zone Safety Committee, Arden Hills, Minnesota. (October 15, 2012). *Invited.*
- Douma, F. P.** "ITS Personal Data Needs - How Much Do We Really Need To Know?," Under Watchful Eyes: Technologies that Track symposium Illinois Institute of Technology Chicago-Kent College of Law, Chicago, Illinois. (October 5, 2012). *Invited.*
- Douma, F. P.,** Zimmer, C. "Complete Streets through Community Partnerships: The Grand Rapids Experience," Minnesota Department of Transportation Non-motorized Transportation Research

- Group, Roseville, Minnesota. (June 6, 2012).
- Douma, F. P.**, Loveland, J., Thorpe, D. "Identifying Issues Related to Deployment of Automated Speed Enforcement," University of Minnesota Center for Transportation Studies Annual Transportation Research Conference, St. Paul, Minnesota. (May 24, 2012).
- Douma, F. P.** "ITS Data Needs: How Much Do We Really Need to Know?," University of Minnesota Center for Transportation Studies Annual Transportation Research Conference, St. Paul, Minnesota. (May 23, 2012).
- Douma, F. P.** "Smart Cars and Smarter People: Is There Room for Both in our Transportation Future?," Grinnell College, Grinnell, Iowa. (April 5, 2012). *Invited.*
- Douma, F. P.** "Emerging Policy and Legal Issues," "Location Data and Privacy Values: Implications for Policy and Planning" Panel 91st Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 25, 2012). *Invited.*
- Douma, F. P.**, Aue, S.\* "'But Officer, it wasn't my fault...the car did it!' and other Criminal Liability Issues Involving Autonomous Vehicles," Santa Clara Law Review Annual Symposium Santa Clara University School of Law, Santa Clara, California. (January 20, 2012). *Invited.*
- Horan, T., **Douma, F. P.**, Munnich, L. "SafeRoadMaps and CrashHelp," Minnesota Towards Zero Deaths Quarterly Breakfast. (January 11, 2012).
- Munnich, L., Horan, T., **Douma, F. P.** "Center for Excellence in Rural Safety," Minnesota Tribes and Transportation Conference, Prairie Island Reservation. (October 25, 2011).
- Douma, F. P.** "Transit and 'Complete Streets' in Central Minnesota," Collage of Sustainability conference University of Minnesota's Regional Sustainable Development Partnerships, Pine River, Minnesota. (October 13, 2011). *Invited.*
- Lari, A., **Douma, F. P.**, Lang Yang, K. "eWorkPlace: Earth Friendly, Work-Life Friendly, Smart Business Strategy," Annual Conference of the Minnesota chapter of the American Planning Association, St. Cloud, Minnesota. (September 30, 2011).
- Douma, F. P.** "ITS Data Needs: How Much Do We Really Need to Know?," University of Minnesota TechPlan Roundtable, Minneapolis, Minnesota. (August 19, 2011).
- Lari, A., **Douma, F. P.**, Lang Yang, K.\*, Caskey, K.\* "Parking Pricing," University of Minnesota Center for Transportation Studies Annual Transportation Research Conference, St. Paul, Minnesota. (May 25, 2011).
- Cao, X., Xu, Z.\*, **Douma, F. P.** "Substitution between E-shopping and Travel: Evidence from the Twin Cities," 90th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 26, 2011).
- Douma, F. P.** "Protect Yourself: Addressing Privacy Issues Both Legally and Politically," Planning & Enabling Smart Transportation Summit, Toronto, Ontario, Canada. (December 2010). *Invited.*
- Douma, F. P.** "Itasca County Area Transportation Study," Minnesota Center for Transportation Studies Research Seminar, Minneapolis, Minnesota. (September 2010). *Invited.*
- Douma, F. P.** "The Challenge of ITS for the Law of Privacy in the United States," Computers, Freedom and Privacy Conference, San Jose, California. (June 2010). *Invited.*
- Douma, F. P.** "Itasca County Area Transportation Study," Minnesota Public Transportation Conference, Rochester, Minnesota. (June 2010). *Invited.*

- Douma, F. P.**, Cureton, C.\*, Schmit, M.\*, Fan, Y. "Itasca County Area Transportation Study," University of Minnesota Center for Transportation Studies Annual Transportation Research Conference, St. Paul, Minnesota. (April 2010).
- Aue, S.\*, **Douma, F. P.** "ITS and Privacy: Suggestions for Peaceful Coexistence," University of Minnesota Center for Transportation Studies Annual Transportation Research Conference, St. Paul, Minnesota. (April 2010).
- Douma, F. P.**, Deckenbach, J.\* "The Implications of Current and Emerging Privacy Law for ITS," ITS Minnesota 16th Annual Meeting & Information Exchange, St. Paul, Minnesota. (March 2010).
- Cao, X., **Douma, F. P.** "Substitution between E-shopping and Travel: Evidence from the Twin Cities," 89th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2010).
- Douma, F. P.**, Aue, S.\* "The Implications of Current and Emerging Privacy Law for ITS," University of Minnesota Intelligent Transportation Systems (ITS) Institute Board of Directors, Minneapolis, Minnesota. (December 2009). *Invited.*
- Douma, F. P.**, Deckenbach, J.\* "The Implications of Current and Emerging Privacy Law for ITS," University of Minnesota ITS Institute Advanced Transportation Seminar Series, Minneapolis, Minnesota. (September 2009). *Invited.*
- Douma, F. P.** "In-Vehicle Technology: Monitoring Teen Compliance with Graduated Driver Licensing Requirements (Privacy Implications)," American Association of Motor Vehicle Administrators 76th Annual International Conference, San Diego, California. (August 2009). *Invited.*
- Cao, X., **Douma, F. P.**, Cleveland, F.\* "Substitution between E-shopping and Travel: Evidence from the Twin Cities," University of Minnesota Center for Transportation Studies Annual Research Conference, Bloomington, Minnesota. (May 2009).
- Douma, F. P.**, Gaug, R.\* "Carsharing in the Twin Cities: Measuring Impacts on Travel Behavior and Automobile Ownership," 88th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2009).
- Douma, F. P.**, Poindexter, G., Frooman, S.\* "Examining Success of Bus Only Shoulder Lanes," Metro Transit Senior Staff, Minneapolis, Minnesota. (December 16, 2008). *Invited.*
- Douma, F. P.**, Cleveland, F.\* "Impact of Bicycling Facilities on Commute Mode Share," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2008).
- Deckenbach, J.\*, **Douma, F. P.** "ITS and Privacy: Developing New Rules for Virtual Roads," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2008).
- Douma, F. P.**, Gaug, R.\* "Carsharing in the Twin Cities: Measuring Impacts on Travel Behavior and Automobile Ownership," University of Minnesota for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2008).
- Douma, F. P.** "Keys in Transit Corridor Planning," Citizen's Forum, Roseville, Minnesota. (March 14, 2008). *Invited.*
- Douma, F. P.**, Poindexter, G., Frooman, S.\* "Bus Only Shoulder in the Twin Cities," 87th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January

2008).

- Douma, F. P.**, Rohde, B. "Center for Excellence in Rural Safety," West Central Minnesota Transportation Advisory Committee, Fergus Falls, Minnesota. (July 2007).
- Stein, B. \*, Frooman, S. \*, **Douma, F. P.** "Twin Cities Bus-Only Shoulder Lanes - Are They Working?," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2007).
- Douma, F. P.**, Raju, R. \* "Urban Transportation Corridor Development Case Studies: Midtown Greenway and Bottineau Boulevard," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2007).
- Douma, F. P.**, Barnes, G. "Transit for All Ages," Minnesota Gerontological Society Annual Conference, Brooklyn Park, Minnesota. (April 27, 2007). *Invited.*
- Zmud, J., Bradley, M., **Douma, F. P.** "Panel Survey Evaluation of Attitudes and Willingness to Pay for Tolled Facilities," 86th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2007).
- Douma, F. P.**, Horan, T., Munnich, L. "Emergency Medical Services in Rural Areas," Minnesota Tribes and Transportation Conference Leech Lake Reservation. (October 2006).
- Anderson, J., **Douma, F. P.** "Telework as a Return to Work Strategy: Challenging Barriers and Unprecedented Opportunities," International Telework Academy's 11th International Workshop on Telework, Fredericton, New Brunswick, Canada. (August 2006).
- Peterson, S. \*, **Douma, F. P.** "Before and After Results of I-394 HOT Lane Panel Survey," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2006).
- Schively, C., Blackstad, L., **Douma, F. P.**, Garner, M. "Planning for Multi-Modal Transportation Corridors: Developing a Best Practices Framework," American Planning Association National Conference, San Antonio, Texas. (April 2006).
- Douma, F. P.** "Planning for Multi-Modal Transportation Corridors: Developing a Best Practices Framework," St. Paul Transportation Management Organization Board of Directors, St. Paul, Minnesota. (June 2005). *Invited.*
- Douma, F. P.** "Planning for Multi-Modal Transportation Corridors: Developing a Best Practices Framework," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2005).
- Patterson, T., **Douma, F. P.** "Pricing Comes to Minnesota: Baseline Attitudinal Evaluation of I-394 HOT Lane Project," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2005).
- Wilson, S. \*, **Douma, F. P.** "Transportation Needs of Foreign-born Ethnic Subpopulations in Rural and Urban Communities: an Environmental Justice Perspective," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2005).
- Douma, F. P.**, Wilson, S. \* "Transportation Needs of Foreign-born Ethnic Subpopulations in Rural and Urban Communities: an Environmental Justice Perspective," Annual Meeting of the Intelligent Transportation Society of America, Long Beach, California. (April 2005).
- Andrew, J. \*, **Douma, F. P.** "Developing a Model for Carsharing in Twin Cities Neighborhoods," University of Minnesota Center for Transportation Studies Planning and Environment Council, Minneapolis, Minnesota. (February 2005).

- Douma, F. P.** "Intelligent Transportation Systems and Other Technological Assistance Used in Minnesota Community-Based Transportation," 84th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2005).
- Douma, F. P.** "Community-Based Transit," City of St. Paul Senior Advisory Committee. (July 2004). *Invited.*
- Douma, F. P.** "Using ITS to Better Serve Diverse Populations," Annual Research Conference University of Minnesota Center for Transportation Studies, St. Paul, Minnesota. (May 2004).
- Douma, F. P., Hedblom, M.** "ITS Opportunities Resulting from Developments in Home Broadband Telecommunications," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (May 2004).
- Douma, F. P., Hedblom, M.** "ITS Opportunities Resulting from Developments in Home Broadband Telecommunications," Annual Meeting of the Intelligent Transportation Society of America, San Antonio, Texas. (April 2004).
- Douma, F. P.** "Community-Based Transit," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (April 2003).
- Douma, F. P.** "Corridor Best Practices," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (April 2003).
- Douma, F. P.** "Guidestar 2001 Survey and Diary Presentation," University of Minnesota Center for Transportation Studies Annual Research Conference, St. Paul, Minnesota. (April 2003).
- Douma, F. P., Lovejoy, A.** "Corridor Best Practices," City of St. Paul Planning Commission, St. Paul, Minnesota. (January 2003). *Invited.*
- Douma, F. P., Hedblom, M.** "Wireless Communication Applications for Transportation: User Boon or Booby Trap?," Telecommunications and Information Society Policy Forum, Minneapolis, Minnesota. (September 2002). *Invited.*
- Wells, K., **Douma, F. P., Pidarthi, P.\*** "How Was Your Trip? Exploring the Relationship Between Telecommunications and Travel Through Time Use Diary," 81st Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2002).
- Kuhn, E.\*, **Douma, F. P.** "Utilizing Transportation Technology to Support Strategic Management Initiatives," 81st Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2002).
- Douma, F. P., Kuhn, E.\*, Chen, W.\*** "Sustainable Transportation," Sustainable Development forum, New Ulm, Minnesota. (August 2001).
- Munnich, L., Pansing, C., **Douma, F. P.** "Sustainable Transportation," Minnesota Department of Transportation Office of Environmental Services, St. Paul, Minnesota. (June 2001).
- Munnich, L., Pansing, C., **Douma, F. P.** "Sustainable Transportation," Minnesota Department of Transportation Executive Team, St. Paul, Minnesota. (March 2001).
- Wells, K., **Douma, F. P., Loimer, H.\*, Olson, L.\*, Pansing, C.** "Telecommuting Implications for Travel Behavior: Case Studies from Minnesota," 80th Annual Meeting of the Transportation Research Board, Washington, District of Columbia. (January 2001).

### ***Stakeholder Roundtable***

- Douma, F. P.** "Roundtable on Autonomous Vehicles," Blandin Foundation, Grand Rapids,

Minnesota. (November 13, 2017).

Audience size: 25

Describe the audience: government officials, transit providers and other stakeholders

### ***Testimony to Minnesota House Legislators***

**Douma, F. P.** "University of Minnesota Research," Climate Action Caucus Transportation Conversation Minnesota House DFL Climate Action Caucus, St Paul, Minnesota, United States. (October 24, 2019). *Invited*.

URL: <https://www.house.leg.state.mn.us/Caucus/View/DFL/26076>

A summary of University of Minnesota research on reducing transportation's impact on the environment

### ***Video***

**Douma, F. P.** "Telework and e-learning," Minnesota GO Strategic Planning effort. (April 2011).

### ***Webinar***

Garry, T., (Presenter)\*, **Douma, F. P., (Presenter)** "ITS Personal Data Needs - How Much Do We Really Need To Know?," ITS America Webinar Series. (February 26, 2013). *Invited*.

### **Media Contributions**

"Car pooling? That's so '70s," Minnesota Public Radio Reaction to News reporting on Parking Symposium	August 9, 2018
"With self-driving cars nearly a reality, Congress wonders how to regulate them," MinnPost	October 31, 2017
"Hourcar embraces car-sharing's electric future in the Twin Cities," Minneapolis Star-Tribune Discussion of car-sharing opportunities in the Twin Cities	October 23, 2018
"Study: Changes to downtown Minneapolis ramps could help combat congestion," Minneapolis Star-Tribune Summary of Parking Symposium	August 8, 2018
"Robo taxis in downtown White Bear? Not here, not yet," White Bear Press	August 8, 2018
"Wisconsin frac sand producers seek relief from rail costs, service issues," LaCrosse Tribune	July 30, 2018
"Self-driving bus travels over the Washington Avenue Bridge," Minnesota Daily	May 1, 2018
"MnDOT tests Driverless Shuttle Bus," Minneapolis Star Tribune	December 13, 2017
"Polaris going after autonomous driving contract for Army," Minneapolis Star Tribune	October 6, 2017
"Polaris' electric GEM vehicles go driverless in Detroit," Minneapolis Star Tribune	September 17, 2017
"Driverless future gets put to the test at St. Louis Park event," Minneapolis Star Tribune	September 9, 2017
"It's not your imagination — parking is disappearing in Minneapolis," Minneapolis Star Tribune	September 2, 2017
"Minnesota planners begin to envision driverless future," Minneapolis Star Tribune	July 31, 2017
"Could these be solutions to Twin Cities traffic problems?," St Paul Pioneer Press	June 16, 2017
"Car2Go and gone: Legislation aims to lure more car-sharing services to TC," Minneapolis Star Tribune	February 11, 2017
"Self-driving cars? They're closer than you think," KMSU	December 7, 2018

Opportunities for self-driving vehicles in greater MN "John Hines Show," WCCO	July 18, 2018
Radio interview on impact of scooters and other shared mobility on transit, parking and related issues "How will driverless cars change our cities?," Minnesota Public Radio	March 20, 2018
"Minnesota small towns envision a driverless future," Minnesota Public Radio	November 27, 2017
"Researchers look at future of downtown Minneapolis parking ramps," KSTP-5 News Summary of Parking Symposium and Research	August 6, 2018
"Good Question: How Do Driverless Cars Work?," WCCO-TV	July 18, 2017

## TEACHING

### Scheduled Teaching

Urban & Regional Planning: PA 4200: Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018

Urban and Regional Planning: PA 4200: Fall 2012

An introductory class that gives an overview of planning theory and practice, with primary attention to current issues in planning practice in the United States. The content covers land use, urban design, transportation, community development, housing, and environmental planning problems within the broader context of the historic development of cities, political processes, and regional and national economic forces.

Environmental Study Design: PA 5742: Fall 2017

Urban Infrastructure Systems: PA 5751: Spring 2017, Spring 2018

### Instructional Activity

#### *University of Minnesota*

Guest Lecture, Transportation Sharing: Market-Based Policy Change, OLPD, 35 participants

November 2019 - Present

Guest Lecture, Policy Implications for Connected and Automated Vehicles, Humphrey School, 20 participants

April 17, 2019 - Present

Guest Lecture, Transportation Sharing: Market-Based Policy Change, 60 participants

April 2019

OLPD 2811: Guest Lecture, Transportation Sharing: Market-Based Policy Change, Lecturer

November 29, 2018

PA 5211: Guest Lecture, Self-Driving Vehicles: Equity and Legal Implications, Lecturer

September 13, 2018

PA 8202: Guest Lecture, Self Driving Vehicle Implications, Lecturer

April 30, 2018

#### *Grinnell College*

Guest Lecture, Policy Implications of Self-Driving Vehicles, Grinnell College, Lecturer, 35 participants

April 24, 2018

Guest Lecture, Policy Implications of Self-Driving Vehicles,

October 6, 2017

Grinnell College, Lecturer, 20 participants

**Other**

Guest Lecture, EWorkplace and Telework, Lecturer April 12, 2017

**ADVISING AND MENTORING  
 Graduate Student Activities**

**Advisees**

Meredith Benesh, Urban/Regional Planning MURP	2019 - Present
Jerica Gomez, Urban/Regional Planning MURP	2019 - Present
Kyle Malone, Urban/Regional Planning MURP	2019 - Present
Sarah Paulus, Urban/Regional Planning MURP	2019 - Present
Shannon Engstrom, Urban/Regional Planning MURP	2018 - Present
Galen Ryan, Urban/Regional Planning MURP	2018 - Present
Yuxuan Guo, Urban/Regional Planning MURP	2017 - 2019
Max Pattsner, Urban/Regional Planning MURP	2017 - 2019
Jonathan Reisetter, Urban/Regional Planning MURP	2017 - 2019
Jessica Wyatt, Urban/Regional Planning MURP	2016 - 2018
Frank Alarcon, Urban/Regional Planning MURP	2016 - 2018
Gretchen Buechler, Urban/Regional Planning MURP	2016 - 2018
Ashley Hartle, Urban/Regional Planning MURP	2016 - 2018

**Committee Advising**

**Doctoral Preliminary Committee: Committee Member**

Peter Nixon, Bpro/Bsys Sci Eng Mgmt Ph D 2017 - Present

**Master's Thesis/Research Committee: Committee Member**

Zheyang Yuan, Architecture M S	2019 - Present
Bailey Hanson, Architecture M S	2017

**SERVICE**

**Service to the Discipline/Profession/Interdisciplinary Area(s)**

**Co-chair**

Transportation Data Privacy Task Force, approximately 25 hours spent per year 2016 - Present

**Member**

Emerging Technology Law Committee, Transportation Research Board August 2007 - Present

Effects of Information and Communication Technologies on Travel Choices Committee, Transportation Research Board January 2001 - January 2012

**Reviewer**

Transportation Research Record 2003 - Present

**Service to the University/College/Department**

**University of Minnesota**

**College**



Chair, Awards and Honors Committee

September 2017 - May 2019

***University***

Member, SCFA Retirement Subcommittee

September 2013 - May 2018

Member, Committee on Committees

September 2007 - June 2013

Member, Professional and Administrative Senate

September 2000 - June 2012

Member, Humphrey School of Public Affairs Dean Search  
Committee

November 2010 - July 2011

Member, University of Minnesota Senate

September 2004 - June 2011

**Public and External Service**

Liaison, Planning, Land Use and Revenue Sub-Committee,  
Minnesota Governor's Connected and Automated Vehicle  
Advisory Council

August 2018 - December 2018

Member, Metro Mobility Task Force, St Paul

August 2017 - February 2018

Session Member, Macalester-Plymouth United Church

January 2011 - June 2017

Board Member, Neighborhood Energy Connection

October 2005 - October 2011

Judge, Minnesota Environmental Initiative Awards

2004

Member, Board of Deacons, Westminster Presbyterian Church

1998 - 2001