University Transportation Centers

UTC 1987 2020

27th Annual Outstanding Student of the Year Awards

Transportation Research Board

97th Annual Meeting

Marriott Marquis

Washington, DC

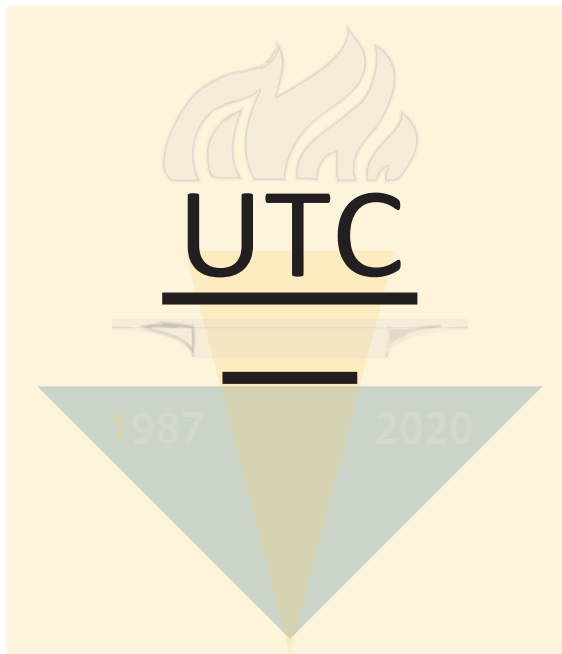January 6, 2018

WELCOME

Welcome to the 27th Annual University Transportation Centers (UTC) Program's Outstanding Student of the Year Awards ceremony, sponsored by the U.S. Department of Transportation (U.S. DOT) and administered by the Office of the Assistant Secretary for Research and Technology (OST-R).

Each year at the annual winter meeting of the Transportation Research Board, the U.S. DOT honors outstanding students from participating UTCs for their achievements and promise for future contributions to the transportation field. Students of the Year are selected based on their accomplishments in such areas as technical merit and research, academic performance, professionalism, and leadership.

OST-R administers the UTC Program with funding from the Federal Highway Administration. Continuing the tradition, the U.S. DOT will also honor two students from the Air Transportation Centers of Excellence, sponsored by the Federal Aviation Administration (FAA).

The Secretary's RAISE Award

Recognizing Aviation and Aerospace Innovation in Science and Engineering

The Secretary's RAISE Award was created by the Secretary of Transportation to recognize innovative scientific and engineering concepts and student achievements that have the potential to significantly impact the future of aerospace or aviation. The Administrator of the FAA accepted student submissions in 2017 and conducted an evaluation based on the technical merit of each concept and also considered such elements as professionalism and leadership qualities. Eligible students must be U.S. citizens or permanent residents, be enrolled in a U.S.-based college or university, and may participate and be recognized as individuals or in teams.

Secretary Ray LaHood initiated this award to incentivize students to think creatively in developing innovative solutions to aviation and aerospace issues, and to share those innovations with the broader transportation community. Each Secretary of Transportation thereafter has continued to support the RAISE Award and remains as the final selecting authority.

It is with great pleasure that the Executive Committee of the Council of University Transportation Centers (CUTC) joins with the U.S. DOT and FAA to highlight the prestigious Secretary's RAISE Award at our Annual Outstanding Student of the Year Awards Ceremony. On behalf of the Secretary of Transportation, the CUTC Executive Committee is pleased to include the RAISE Award again this year in a combined effort to recognize outstanding student achievement in transportation studies, encourage exceptional examination of our challenges, and facilitate the development of new solutions to accelerate advancements in the field by the next generation of transportation scientists.

Joseph W. Daniels III

Secretary's RAISE Award Recipient

Secretary of Transportation Elaine L. Chao has selected Joseph W. Daniels III as the RAISE award recipient to be honored this year. Joseph is a Dwight David Eisenhower Transportation Fellow and an enthusiastic scholar, leader, and mentor. He is currently pursuing his doctorate in civil engineering at the University of Arkansas. His thesis is titled "Development of an Anti-Icing Airfield Heated Pavement System Using Solar Energy." This concept and related research activities have focused on advanced heated airport pavement systems to reduce safety risks for aircraft ground operations and increase efficiency of operations during wintry conditions. Joseph is also seeking to incorporate sustainable practices and renewable energy in his research approach to increase cost efficiency, system longevity, and environmental protection.

Joseph reflects a passion for aviation improvements overall and shows a willingness to continue to explore additional solutions to a problem which is deserving of further consideration. His concept proposes an innovative solution with strong economic and environmental benefits, focuses on how to increase safety at our airports, and exemplifies the student's depth and breadth of knowledge of FAA's mission. Secretary Chao is pleased to recognize Mr. Joseph W. Daniels III with this distinguished award for his extraordinary research, scholarly achievements, and vision.

Federal Aviation Administration

Air Transportation Centers of Excellence

Under the authority provided in Public Law 101-508, the Federal Aviation Administration (FAA) establishes Air Transportation Centers of Excellence (COEs) to create cost-sharing partnerships with academia, industry, and government organizations throughout the U.S. With equal support from the FAA and other government and industry organizations, the Air Transportation COEs perform basic research through engineering development and prototyping, education, training, and technology transfer.

These multidisciplinary partnerships forge unions between academic institutions and the public sector (FAA, airport authorities, state/local governments, etc.), and the private sector (airlines, manufacturers, etc.). The FAA has created the following COEs to address short- and long-term aviation related issues of major importance to focus on: Technical Training and Human Performance, Unmanned Aircraft Systems, Alternative Jet Fuels and Environment. General Aviation Safety, Commercial Space Transportation, Advanced Materials, Cabin Environment and Intermodal Research, Aircraft Noise and Aviation Emissions Mitigation, General Aviation Research, Airworthiness Assurance, Operations Research, Airport Technology, and Computational Modeling of Aircraft Structures.

Under the enabling legislation, the FAA has established 13 COE partnerships with more than 100 universities throughout the U.S. Research outcomes are documented in more than 3,000 publications, reports, master's level theses, and doctoral dissertations. Funded through contracts and matching grant awards, FAA COEs currently reflect a level of effort exceeding $600M. The one-to-one matching contributions are provided by academia, industry, state and local entities, international affiliates, and other non-federal sources.

Strengthening the relationships with industry and other partners, the FAA makes a 10-year commitment to support each COE at a base funding level. These joint investments enable coordination within each research topic area to avoid duplication of effort, and effectively stimulate collaboration across various disciplines while facilitating the education of a pool of scientists to serve as the next generation of aviation professionals. The FAA COEs conduct world-class research and provide a cadre of well-trained scientists prepared to identify solutions for existing and anticipated aviation and related transportation challenges.

University Transportation Centers Program

The past year has been busy for the U.S. DOT, as the agency launched new initiatives designed to set transportation in motion toward a more connected, accessible, and sustainable future. The University Transportation Centers (UTC) Program bolstered those efforts, advancing research on topics such as connected vehicles, pedestrian and cyclist safety, freight performance measures, and emissions reduction technologies.

For 27 years, the UTC Program has advanced U.S. technology and expertise in transportation through education, research, and technology transfer at universities nationwide under the management of the U.S. DOT's Office of the Assistant Secretary for Research and Technology. The UTC Program was created by Section 314 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, 49 U.S.C. §5317, with the primary purpose of conducting research.

The Intermodal Surface Transportation Equity Act (ISTEA) of 1991 reauthorized the UTC Program through fiscal year (FY) 1997, and expanded its mission to include education and technology transfer. In addition to the 10 Regional Centers, ISTEA created 3 "National" Centers and 6 University Research Institutes at universities named in ISTEA. This expansion led the U.S. DOT to adopt a strategic planning approach to program management based on a mission and set of goals that applied to all 13 centers and 6 institutes. The U.S. DOT extended the grants to the Regional Centers for three years, and announced its intention to reopen the program to competition, which occurred in 1994.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) reauthorized the UTC Program for an additional six years and increased the total number of centers from the original 10 to 33. In 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) increased the number of centers to 60. In addition to the 10 Regional Centers, which were competitively selected, 10 Tier-1 funded centers were also competitively selected. With the exception of the Title III centers, all of the UTCs are required to provide a 1-for-1 funding match.

The Surface Transportation Extension Act of 2011 (the Extension Act), gave discretion to redistribute the funds allocated to specific research projects and programs designated in SAFETEA-LU. In accordance with the Extension Act, the U.S. DOT competitively awarded grants to 22 UTCs in the amount of approximately

$3.5 million each to 10 Tier 1 UTCs, two Tier 1 Transit-Focused UTCs, and 10 Regional UTCs. These grants were awarded in 2011, and FY 2012 funds were added following extension legislation.

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) continued the UTC program, authorizing the competitive selection of 35 UTCs to receive a total of $72.5 million in funding for each of Fiscal Years 2013 to 2014, with continued funding from extension acts through Fiscal Year 2015. Following a competition in 2013, grants of approximately $3 million each were awarded to five National UTCs, $2.75 million each to 10 Regional UTCs, and $1.5 million each to 20 Tier 1 UTCs.

Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94), signed in December 2015, was the first federal law in over a decade to provide long-term funding for surface transportation infrastructure planning and investment. The FAST Act authorized $305 billion in spending from FYs 2016 through 2020 for the maintenance of existing and establishment of new initiatives in research, education and workforce development, and the facilitation of technology transfer. To fulfill the FAST Act federal mandate, U.S. DOT hosted a grant competition that resulted in the announcement of 32 new UTCs in December 2016.

| RAISE | **Joseph W. DanielsIII** |
| | University of Arkansas |

University Transportation Centers
Outstanding Students of the Year

Students are organized by primary mode of interest/study area.

AIR	**Cynthia Glass**
	North Carolina A&T State University
	Joshua Harris
	Texas A&M University
	FAA Center of Excellence
	Max Li
	University of Pennsylvania
	Jacqueline Thomas
	Massachusetts Institute of Technology
	FAA Center of Excellence

| MARITIME | **Miles Winston** |
| | California State University, Long Beach |

MULTIMODAL	**Leslie Brown**
	University of Florida
	Ian Butler-Severson
	University of New Orleans
	Nicholas Fournier
	University of Massachusetts, Amherst
	Leslie Gillespie-Marthaler
	Vanderbilt University
	Katherine Idziorek
	University of Washington
	Somayeh Moazzeni
	University of Texas at Arlington
	Joshua Morales
	University of California, Riverside
	Elizabeth O'Neal
	University of Iowa
	Jordan Preston
	Oregon Institute of Technology
	Carole Turley Voulgaris
	University of California, Los Angeles

PUBLIC TRANSIT	**Brendan Goodrich**
	University of Texas at Austin
	Scott Kilgore
	University of Texas at Austin
	Dilip Mistry
	North Dakota State University
	Stefan Pougatchev
	New York Institute of Technology
	Aaron Vogel
	San José State University

| RAIL | **James Aranda** |
| | University of Texas Rio Grande Valley |

ROAD	**Ahmed Jasem Al-Basha**
	New Mexico State University
	Kiriakos Amiridis
	University of Kentucky
	Golnush Masghati Amoli
	University of Maryland
	William Baker
	University of Delaware
	Natalia Barbour
	University of South Florida
	Richard Driscoll
	University of South Florida
	Kayla Fleskes
	Oregon State University
	Trevor Gardner
	Utah State University
	Regan Hansen
	University of Idaho
	Eli S. Hernandez
	Missouri University of Science and Technology
	Jonathan Hochmuth
	Western Michigan University
	Nur Hossain
	University of Oklahoma
	Amanda Johnson
	Carnegie Mellon University
	Evan Jordan
	University of Nevada, Reno
	Grant John Karr
	University of Hawaii at Manoa

ROAD (continued)	**Matthew Klegseth** Missouri University of Science and Technology
	Nicholas Liccardo University of Nevada, Reno
	Rebecca Naumann University of North Carolina at Chapel Hill
	Rahul Patel University of Texas at Austin
	Maryam Shirinzad Texas A&M University
	Tiffany Treviño University of Nebraska-Lincoln
	Matthew Vechione University of Texas at El Paso
	Jeremy Weiss Morgan State University
ROAD, AIR	**Alana Wilson** Georgia Institute of Technology
ROAD, PUBLIC TRANSIT	**Frank Alarcon** University of Minnesota-Twin Cities
	Hanjiro Ambrose University of California, Davis
	Shweta Dixit George Mason University

Joseph W. Daniels III

University of Arkansas

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2017 Secretary's RAISE Award Recipient

Bio

Joseph Daniels is an enthusiastic scholar, leader, and mentor, currently pursuing his doctorate in civil engineering at the University of Arkansas. A native of Silver Spring, Maryland, Joseph is a graduate of North Carolina A&T State University, where he received a bachelor of science degree in civil engineering. He is conducting research on heated pavement systems with a focus on airfield pavements. His objective is to incorporate sustainable practices and renewable energy into his research approach for cost efficiency, system longevity, and environmental protection.

Degree and Graduation Date (or Anticipated Date)

Joseph will receive a doctorate in civil engineering in the summer of 2018.

Preferred Career after Graduation

Joseph intends to become a professor in civil engineering; structures with an emphasis on transportation-related structures.

Broad Research Interest Area

Airfield and highway pavements.

Specific Research Area

Thermal behavior of concrete pavements.

Primary Mode(s)

Air

Top Accomplishment in 2017

Joseph received the Airport Cooperative Research Program Graduate Research Award, and the 2017 Dwight David Eisenhower Transportation Fellowship Program's Graduate Fellowship.

Thesis Title and Summary

"Development of an Anti-Icing Airfield Heated Pavement System using Solar Energy."

This research analyzes the development and assesses the viability of an all-solar operated anti-icing airfield HPS in an attempt to reduce safety risks for aircraft ground operations which greatly intensify during wintry conditions. The solar energy system is being designed to augment the airport energy infrastructure to help supplement an airport's year-round energy needs.

Cynthia Glass

North Carolina A&T State University

Center for Advanced Transportation Mobility

Cgcango2@gmail.com

Bio

Cynthia Glass graduated from Howard University with a bachelor of science degree in mechanical engineering, and George Washington University with a master of science degree in engineering and technology management. Cynthia is pursuing a PhD in computational science and engineering at North Carolina A&T State University. Cynthia evaluated safety-related vehicle defects and initiated over 500 recalls for motor vehicles and motor vehicle equipment at the U.S. Department of Transportation. Cynthia led the full life-cycle design, development, and manufacture of exterior ornamentation systems and components at Ford Motor Company.

Degree and Graduation Date (or Anticipated Date)

Cynthia will receive a PhD in computational science and engineering in December 2018.

Preferred Career after Graduation

Cynthia plans to pursue a career in academia.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Airline operations optimization.

Primary Mode(s)

Air

Top Accomplishment in 2017

Cynthia conducted research for the UTC CATM project.

Thesis Title and Summary

"The Impact of Disruptions to Air Transportation Systems Management."

Disruptions to an air transportation network have a broad impact and involve many stakeholders. The decision to revise schedules or suspend travel is a complex process. Cynthia's dissertation will evaluate the impact of disruptions to air transportation systems management.

Joshua Harris

Texas A&MUniversity

FAA Center of Excellence for
General Aviation

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Bio

Joshua Harris earned his bachelor of science in Aerospace Engineering from Texas A&M University in 2014, and was voted the Outstanding Aerospace Engineering senior by his student peers. In 2013, he interned at NASA Ames Research Center as a recipient of the NASA Aeronautics Scholarship Program, working on state analysis tools in support of the Space Launch System Program. He is a recipient of the National Defense, Science, and Engineering Graduate (NDSEG) Fellowship, and the Sigma Gamma Tau Southwestern Region Award. He is currently a graduate research assistant in the Vehicle Systems & Control Laboratory, where he has been working on research involving flight mechanics and control since his freshman year. His primary research interest is adaptive and resilient flight control for fixed-wing aircraft, and implementation of flight control laws on size, weight, power, and cost-constrained small unmanned aircraft systems. He is a student member of AIAA, IEEE, SIAM, and Sigma Gamma Tau, and is an associate member of the AIAA Intelligent Systems Technical Committee.

Degree and Graduation Date (or Anticipated Date)

Joshua is a graduate student at Texas A&M University and expects to complete his studies in December 2017.

Preferred Career after Graduation

Joshua plans to pursue a career in the private sector.

Broad Research Interest Area

General aviation/flight systems and controls.

Specific Research Area

Flight control and mechanics of air vehicles.

Primary Mode(s)

Air

Top Accomplishment in 2017

Joshua was awarded the Outstanding Student Researcher Award—FAA COE for General Aviation/PEGASAS (2017).

Thesis Title and Summary

"Nonlinear Adaptive Dynamic Inversion Control for Variable Stability Small Unmanned Aircraft Systems."

The objective of this thesis is the design of a variable stability system for improving the flight safety of test aircraft. The capability to use in-flight simulation for verification and validation of autopilot control laws, as opposed to the currently used 'in the flight simulator,' makes this a valuable resource for risk reduction of high-value aircraft assets during flight testing. It is also applicable to production aircraft for improving their safety during routine operational use.

Max Li

University of Pennsylvania

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at Carnegie Mellon University

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maxzhaoyuli@gmail.com

Bio

Max Li is completing a joint BS-MS degree from the University of Pennsylvania (UPenn) majoring in electrical engineering and mathematics (undergraduate) and systems engineering (graduate). Max has been conducting research on the aviation system since 2014, and currently is focused on air traffic flow management, and air traffic control. He has been funded since spring 2015, and has independently pursued research topics in aviation data science, trajectory-based flow management, and surface-airspace integrated modeling, resulting in multiple accepted peer-reviewed publications. Max is also passionate about teaching and mentoring, and has held teaching assistantships in a variety of classes at UPenn since fall 2015.

Degree and Graduation Date (or Anticipated Date)

Max will receive a joint bachelor's and master's degree from the University of Pennsylvania in May 2018.

Preferred Career after Graduation

Max will continue his studies and pursue a doctoral degree.

Broad Research Interest Area

Infrastructure systems, intelligent transportation systems.

Specific Research Area

Air traffic control, air traffic flow management, terminal airspace modeling, trajectory-based flow management, optimization and control.

Primary Mode(s)

Air

Top Accomplishment in 2017

Max was first author on three publications submitted to peer-reviewed sources: (1) accepted conference publication to ICRAT2016; (2) accepted journal publication to Chinese Journal of Aeronautics; (3) journal submission to Transportation Research Part D currently in second-round review.

Thesis Title and Summary

"Towards More Resilient and Predictable Skies: New Terminal Resiliency Metrics via Trajectory Persistence and Optimal Control of Airport and Terminal Airspace Operations."

In order for capacity-constrained airspaces to accommodate the continued growth in air traffic, more resiliency and predictability is required within the en-route and terminal airspaces. The work in this thesis seeks to address both facets by implementing novel airspace resiliency metrics and improving time-of-arrival predictability via surface-airspace integrated queue models. New metrics and expanded models provide better objectives for aviation researchers, air traffic controllers, and airport operators to optimize and control, leading to a more efficient and expedient aviation system.

Jacqueline Thomas

Massachusetts Institute of Technology

FAA Center of Excellence for Jet Fuels and Environment (ASCENT)

thomasj1@mit.edu

Bio

Jacqueline Thomas is a doctoral candidate in aeronautics and astronautics at the Massachusetts Institute of Technology where she is investigating advanced aircraft noise models and flight procedures to reduce community noise impact. She was a teaching assistant and was involved in the design, build, and flight test of the Jungle Hawk Owl long-endurance (five-day) UAV for communications support for disaster relief. Jacqueline served as team lead and pilot for the University of California Irvine Human Powered Flight Team. She is also a private pilot.

Degree and Graduation Date (or Anticipated Date)

Jacqueline will receive her PhD in January 2019.

Preferred Career after Graduation

Jacqueline plans to pursue a career in academia.

Broad Research Interest Area

Reducing aircraft noise impact.

Specific ResearchArea

Aircraft noise modeling and low-noise flight procedures.

Primary Mode(s)

Air

Top Accomplishment in 2017

Jacqueline conducted her research through the Center for Excellence for Jet Fuels and Environment focusing on Aviation Sustainability. Using her method, Jacqueline has developed reduced speed departure procedures which reduce the aerodynamic noise to the same level as climb power engine noise. Initial results indicate a greater than 10dB noise reduction under concentrated flight paths.

Thesis Title and Summary

"Analytical Approaches for Quantifying Aircraft Noise Impacts of Advanced Operational Procedures."

Jacqueline has integrated NASA-based aircraft component noise models with aircraft performance codes and procedure design tools to allow more sophisticated evaluation of takeoff and landing noise.

Miles Winston

California State University, Long Beach

METRANS Transportation Center
at University of Southern California

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Bio

Miles Winston is a graduate student pursuing a master's degree in supply chain management at California State University, Long Beach. He has been awarded scholarships from the Port of Long Beach and works as a research assistant at the Center for International Trade and Transportation. Prior to graduate school, Miles worked in the warehousing, freight forwarding, and trucking sectors, with an internship as a supply chain business analyst at Intel Corporation being his most recent position. Upon completion of the degree program, Miles will begin a full-time role in supply planning operations at Intel's site in Hillsboro, Oregon.

Degree and Graduation Date (or Anticipated Date)

Miles expects to graduate in August 2018 with a master of science degree.

Preferred Career after Graduation

After graduation, Miles plans to work in the private sector.

Broad Research Interest Area

Transportation planning, freight.

Specific Research Area

NA

Primary Mode(s)

Maritime

Top Accomplishment in 2017

Miles was invited to represent his cohort on the school's Operations and Supply Chain Management Advisory Board.

Thesis Title and Summary

NA

Leslie 'Les' Brown

University of Florida

Southeastern Transportation Research, Innovation, Development & Education (STRIDE) Center

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les.brown@ufl.edu

Bio

Les Brown is a transportation planner and policy analyst with ICF. As a graduate research assistant at the University of Florida, he helped manage a statewide initiative to provide technical support for rural communities seeking to qualify for Safe Routes to School infrastructure funding, and provided research and facilitation for a charrette exploring the impacts of emerging transportation technologies on transit agencies. Prior to pursuing his master's degree in urban and regional planning, his work in New York helped welcome the nation's largest bike share and Vision Zero programs. He is currently completing his thesis exploring transit accessibility and transportation network company (TNC) use.

Degree and Graduation Date (or Anticipated Date)

Les will earn a master's degree in urban and regional planning in April 2018.

Preferred Career after Graduation

Les plans to pursue a career in the private sector.

Broad Research Interest Area

Transportation planning, transport policy.

Specific Research Area

Transportation network companies, transit accessibility, transit ridership, connected and automated vehicles, shared mobility.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

For the Florida Department of Transportation's Safe Routes to School Technical Assistance project, Les coauthored a technical report, oversaw a statewide geographic information system analysis of active travel to school potential, developed a framework for updating Florida's Safe Routes to School toolkit, and created a sophisticated stakeholder outreach strategy.

Thesis Title and Summary

"Exploring the Influence of Transit Accessibility on the Use of Transportation Network Company Services in New York City."

Using Amazon Mechanical Turk surveys and spatial analysis techniques, this research uses a mixed-methods approach to explore the relationship between socioeconomic characteristics, residential proximity to transit, and TNC use. Respondents' sentiment toward emerging shared mobility models and pricing variables will also be examined in light of these factors. With recent declines in transit use and rapid growth in ride-hailing services, this research may provide valuable insight on the extent to which TNCs may complement or compete with future transit systems.

Ian Butler-Severson

University of New Orleans

MarTREC
at University of Arkansas

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Bio

Ian Butler-Severson received a bachelor of arts in urban studies from Hamline University. He spent a semester abroad at the University of Oslo, Norway studying Oslo's Transit Oriented Development planning strategies. In 2001, Ian accepted a job with the Minneapolis planning and design firm, Ingraham & Associates where he gained experience in site analysis, computer-aided design, model building, construction documents, cost estimations, subdivision design, and zoning. Ian is currently pursuing a master of science in transportation at the University of New Orleans Transportation Institute where he is engaged with liquefied natural gas (LNG) policy research, freight planning, and geographic information systems (GIS).

Degree and Graduation Date (or Anticipated Date)

Ian will receive a master's degree from the University of New Orleans Transportation Institute in May 2018.

Preferred Career after Graduation

Ian plans to work in the public sector.

Broad Research Interest Area

Transportation planning, freight.

Specific Research Area

Energy infrastructure, international trade and transportation, GIS.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Ian presented his LNG work at the Transportatin Research Board Annual Meeting and the Smart Rivers Conference; he presented his containerized urban agriculture work at the LA American Planning Association and at the Southern Foodways Alliance Conference, and he presented his Changing Trade Patterns research at the I-NUF Conference.

Thesis Title and Summary

"New Orleans–Baton Rouge Passenger Rail Feasibility Study."

This study investigates the feasibility of a passenger rail line between Baton Rouge and New Orleans by determining who the major players are and if they are in support/opposition, possible funding sources, estimated riders/trips, sustainability, routing and stop locations, and implementation timeline. Findings indicate a passenger rail system would not only likely provide relief from commuter and freight highway congestion on I-10, but provide additional means for emergency evacuations in case of future hurricanes and flooding, provide alternative options for workers and business commuters and leisure/entertainment travelers in the growing economy of the region, help decrease auto pollution, and other benefits.

Nicholas Fournier

University of Massachusetts, Amherst

New England UTC
at Massachusetts Institute of Technology

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Bio

Nicholas Fournier completed a bachelor's degree in civil and environmental engineering in 2011 at the University of Massachusetts, Amherst. He worked for three years as a civil engineer in San Francisco before returning to graduate school for a master's degree in regional planning in 2014, but continued for a master's and PhD in transportation engineering. His research is continuously evolving, but includes bicycle infrastructure safety, bicycle demand modeling, socio-spatial demography, and multimodal system modeling. He was previously an intern for the U.S. Department of Transportation at the Volpe National Transportation Systems Center and hopes to pursue a career in academia.

Degree and Graduation Date (or Anticipated Date)

Nicholas expects to receive a PhD in transportation engineering in fall 2018.

Preferred Career after Graduation

Nicholas plans to pursue a career in academia or in the private sector.

Broad Research Interest Area

Transportation planning, transport policy, infrastructure systems.

Specific Research Area

Multimodal transportation systems, bicycle transportation, bicycle safety, public transit.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Nicholas was the recipient of the Daniel B. Fambro Student Paper Award, National ITE, and the Dwight D. Eisenhower Fellowship in 2016. He published two academic journal papers titled "A Sinusoidal Model for Seasonal Bicycle Demand Estimation" in Transportation Research Part D and "A Mixed Methods Investigation of Bicycle Exposure in Crash Rates" in Accident Analysis and Prevention.

Thesis Title and Summary

"A Socio-Spatial Multimodal System Model."

A proposed socio-spatial system model which integrates robust system models to determine the desired optimal system state that can then be achieved through data-driven behavioral models. The model accounts for multimodal trips using an additive choice model as well as socio-economic distributions.

Leslie Gillespie-Marthaler

Vanderbilt University

Maritime Transportation Research and
Education Center
at University of Arkansas

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Bio

Leslie Gillespie-Marthaler graduated from the United States Military Academy in 1994 with a bachelor of science degree in environmental engineering, and served for five years as an active duty U.S. Army officer. She received a master of science degree in civil engineering from the Georgia Institute of Technology in 2002, and a professional degree in engineering management from George Washington University in 2011. She worked as a federal employee for the U.S. Army and Environmental Protection Agency (EPA), and served two details to the White House at the Council on Environmental Quality (CEQ/OFEE) and the Office of Management and Budget (OMB). She is currently a PhD student at Vanderbilt University, seeking a degree in environmental engineering. Her research is focused on community resilience.

Degree and Graduation Date (or Anticipated Date)

Leslie expects to receive a PhD from Vanderbilt University in 2019.

Preferred Career after Graduation

Leslie plans to pursue a career in academia or consulting in the public or private sector.

Broad Research Interest Area

Infrastructure systems.

Specific Research Area

Dynamic resilience of coupled social-ecological systems with emphasis on interactions between humans and built/natural infrastructure regarding vulnerability, sustainability, and adaptive capacity.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Leslie has so far coauthored three papers and is currently working on a fourth. She's been a very productive and efficient student who pushed forward an important conceptual framework of resilience and sustainability and put together a substantive review of community resilience indicators.

Thesis Title and Summary

"Assessment of Community Resilience to Flood, Using the Framework for Sustainable Resilience and Associated Indicators with Consideration of Future Scenarios."

This work assesses the current and future resilience of a community in Western Tennessee to flood hazard while testing a recently developed framework for "sustainable resilience," and set of "foundational indicators for community resilience." Results will enhance the ability to operationalize dynamic community resilience assessment and development of long-term, adaptive strategies to achieve community resilience.

Katherine Idziorek

University of Washington (UW)

Center for Teaching Old Models New Tricks (TOMNET) at Arizona State University

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Bio

Katherine Idziorek, AICP, completed master's degrees in both architecture and urban planning at the University of Washington (UW) in 2008, and is currently a second-year student in the Interdisciplinary PhD program in urban design and planning at UW. She has eight years of professional experience in urban design consulting and community outreach for campus planning and transportation infrastructure projects. Katherine's research focuses on appreciative-inquiry-based explorations of community resilience that consider interactions between interdependent social and physical (transportation) infrastructures. She hopes to use this research to support more inclusive ways of working with communities to improve their overall resilience.

Degree and Graduation Date (or Anticipated Date)

Master's degrees in architecture and urban planning from the University of Washington, 2008. Katherine expects to receive a PhD in urban design and community outreach in December 2020.

Preferred Career after Graduation

Katherine plans to pursue a career in academia.

Broad Research Interest Area

Transportation planning and infrastructure systems.

Specific Research Area

Community disaster preparedness, multimodal transportation planning.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Katherine participated in the TOMNET Center kickoff meeting and assisted in developing a TOMNET research proposal entitled "Understanding Community Behaviors and Attitudes for Resilience: Developing a Scalable Survey Methodology," on which she is currently working.

Thesis Title and Summary

"Behaviors, Attitudes, and Interdependent Infrastructures: Developing a Scalable Methodology for Community Engagement around Resilience."

Katherine's dissertation project focuses on gaining a better understanding of how social and physical infrastructures interact with one another during times of disruption (such as during a disaster) at the community scale. Using an appreciative inquiry-based research methodology, her aim is to better understand community attitudes about priorities, resources, and tradeoffs to enable bottom-up planning that builds community resilience to disaster while improving everyday community well-being and multimodal transportation functionality.

Somayeh Moazzeni

University of Texas at Arlington

Center for Transportation Equity, Decisions and Dollars (C-TEDD)

somayeh.moazzeni@uta.edu

Bio

Somayeh Moazzeni is a PhD student in the Urban Planning and Public Policy program at the University of Texas at Arlington. She has researched a variety of topics, including walkability, housing and transportation affordability, transit system efficiency, and access to opportunities. Somayeh is one of UT's top doctoral students and has experience with advanced geographic information systems (GIS) analysis and quantitative research methods. Somayeh has successfully presented her research findings at several conferences, including the Transportation Research Board (TRB) and the Association of Collegiate Schools of Planning (ACSP).

Degree and Graduation Date (or Anticipated Date)

PhD candidate in urban planning and public policy at the University of Texas at Arlington, 2019.

Preferred Career after Graduation

Somayeh plans to pursue a career in either consulting or the public sector.

Broad Research Interest Area

Transportation planning, transport policy

Specific Research Area

Transportation equity.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Somayeh was a key member on several research projects, including the assessment of transportation efficiency and equity in Dallas, Texas—assessing housing affordability in the Dallas/Fort Worth area, and performing a comprehensive analysis of walkability in Dallas. She has also made two presentations at the ACSP conference and two paper presentations at the TRB conference. In addition, Somayeh has three research papers under review (or preparation) for submission to transportation journals.

Thesis Title and Summary

"The Role of the Transportation System on Providing Access to Opportunities for Vulnerable Populations."

Achieving upward mobility is often attributed to social dynamics, political structure, and family background. The goal of Somayeh's dissertation is to address a new dimension and to study the role of urban form and transportation systems on upward mobility. More specifically, Somayeh will analyze access to social, economic, educational, and health opportunities through a multimodal transportation network.

Joshua Morales

University of California, Riverside

National Center for
Sustainable Transportation
at University of California, Davis

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Bio

Joshua Morales received a bachelor of science degree with high honors in electrical engineering from the University of California, Riverside. He is currently pursuing a PhD from the Department of Electrical and Computer Engineering at the University of California, Riverside, and is a member of the Autonomous Systems Perception, Intelligence, and Navigation (ASPIN) Laboratory. His research interests include estimation, autonomous vehicles, intelligent transportation systems, and navigation systems.

Degree and Graduation Date (or Anticipated Date)

Joshua will receive a PhD in electrical and computer engineering from the University of California, Riverside in June 2019.

Preferred Career after Graduation

Joshua plans to pursue a career in the public sector.

Broad Research Interest Area

Intelligent transportation systems.

Specific Research Area

Vehicle's position, velocity, and timing determination using signals of opportunity; integrated navigation systems; autonomous vehicles.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Joshua was awarded the best paper presentation for "Distributed Signals of Opportunity Aided Inertial Navigation with Intermittent Communication," ION GNSS+ Conference, 2017; and the best paper presentation for "Signals of Opportunity Aided Inertial Navigation," ION GNSS+ Conference, 2016.

He received the National Center for Sustainable Transportation (NCST) Fellowship award, UCR, 2016, as well as honorable mention, National Science Foundation (NSF), 2016.

Thesis Title and Summary

"Exploitation of Radio Frequency Signals of Opportunity for Accurate and Resilient Navigation."

Standalone global positioning system (GPS) signals will not satisfy the stringent accuracy and robustness requirements of future fully autonomous vehicles. This thesis studies the use of ambient radio frequency signals of opportunity (e.g., cellular and digital TV signals) as a supplement or standalone alternative to GPS signals. This thesis synthesizes algorithms for optimal mapping of signals of opportunity, collaborative navigation architectures, and sensor fusion.

Elizabeth O'Neal

The University of Iowa

SAFER-SIM University Transportation Center

elizabeth-oneal@uiowa.edu

Bio

Elizabeth E. O'Neal received her bacheolor's of science in psychology from the University of Alabama, Birmingham. She received her MPH from the University of Iowa and is currently a PhD candidate in the Psychological and Brain Sciences Department at the University of Iowa. She has over six years of experience conducting research with children in immersive virtual environments and using sophisticated statistical methods to analyze behavioral data. Her primary interest is the role of parent-child conversations in preventing unintentional childhood injuries. Her work is the first to study these conversations in vivo, using a joint road-crossing task in an immersive pedestrian simulator.

Degree and Graduation Date (or Anticipated Date)

Bachelor's degree in psychology from the University of Alabama.

MPH from the University of Iowa in 2016.

PhD expected in May 2018.

Preferred Career after Graduation

Elizabeth plans to pursue a career in academia.

Broad Research Interest Area

Intelligent transportation systems.

Specific Research Area

Bicycle and pedestrian safety.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Elizabeth published an article in a top-tier journal on how children and adults cross roads in an immersive pedestrian simulator. She found that child pedestrians do not show adult-like skill when crossing busy roads until age 14. This research was featured on ABC's Good Morning America and received extensive media publicity.

Thesis Title and Summary

"Using a Virtual Environment to Study Parent-Child Conversations about Pedestrian Safety in Children with and without ADHD."

Elizabeth's dissertation project involves the use of virtual environment technology to examine differences in safety conversations between mothers and their children with and without Attention-Deficit Hyperactivity Disorder (ADHD), while jointly engaged in a potentially risky activity (walking across traffic-filled virtual roads).

Jordan Preston

Oregon Institute of Technology

National Institute for Transportation and Communities (NITC)
at Portland State University

jpreston724@gmail.com

Bio

Jordan Preston is currently pursuing co-terminal bachelor's and master's degrees in civil engineering with a minor in geographic information systems at Oregon Tech. Her graduate project is an alternatives analysis for a complete streets redesign that incorporates many design principles from a summer bicycle transportation course in Europe. The first of her NITC projects is development of instructional modules for students to use smartphone technology to obtain vehicle dynamics data for analysis and use in roadway design. Second, she is on the multi-institutional team with "Rethinking Streets for Bikes," assisting in development of a visual, evidence-based book focused on excellent bicycle-oriented street retrofits.

Degree and Graduation Date (or Anticipated Date)

Jordan will receive dual master's and bachelor's degrees from the Oregon Institute of Technology in June 2018.

Preferred Career after Graduation

Jordan plans to work in the public or private sector.

Broad Research Interest Area

Transportation planning, traffic engineering.

Specific Research Area

Complete streets retrofits, protected and buffered bike lanes, multimodal policy, bike and pedestrian safety.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Jordan received the Sharon D. Banks Scholarship from Women in Transportation Seminar, the Dawn Lindeman Memorial Scholarship from Asphalt Pavement Association of Oregon, and the Oregon Section ITE Undergraduate Scholarship.

Thesis Title and Summary

"Complete Streets Redesign of a Community-to-Campus Corridor in a Residential Neighborhood of a Small Oregon City."

Several alternatives have been proposed for a community-to-campus corridor in a residential neighborhood of Klamath Falls, Oregon. Each alternative incorporates Complete Streets principles that transforms the existing roadway into a multimodal facility focused on moving people rather than vehicles.

Carole Turley Voulgaris

University of California, Los Angeles

Pacific Southwest Region 9 UTC
at University of Southern California

cvoulgar@calpoly.edu

Bio

Carole Turley Voulgaris is an assistant professor of civil and environmental engineering at the California Polytechnic University, San Luis Obispo. She studies and teaches on travel behavior, transportation finance, and transportation operations and design. She holds bachelor's and master's degrees in civil engineering from Brigham Young University, and a Master of Business Administration in finance from the University of Notre Dame, and a PhD in urban planning from the University of California, Los Angeles (UCLA). She has been an Eisenhower Transportation Fellow, an Eno Center for Transportation Fellow, and she won the Barclay Gibbs Jones Award for her PhD dissertation in planning from the Associate of Collegiate Schools of Planning.

Degree and Graduation Date (or Anticipated Date)

Carole earned her PhD in June 2017.

Preferred Career after Graduation

Carole plans to continue working in academia.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Travel behavior and transportation funding.

Primary Mode(s)

Multimodal

Top Accomplishment in 2017

Carole accepted a tenure-track position in the Civil and Environmental Engineering department at Cal Poly San Luis Obispo.

Thesis Title and Summary

"Crystal Balls and Black Boxes: Optimism Bias in Ridership and Cost Forecasts for New Starts Rapid Transit Projects."

In her dissertation, Carole evaluates improvements in the accuracy of cost and ridership forecasts for federally funded transit infrastructure projects, and identifies potential causes for these improvements through interviews with transit professionals and statistical analysis of the relationships between observed forecast accuracy and a variety of project characteristics. She finds that the perceived purpose of forecasts has evolved over time in ways that incentivize more accurate forecasts. She also finds that the most accurate forecasts are for projects with shorter construction durations.

Brendan Goodrich

University of Texas at Austin

Cooperative Mobility for Competitive Megaregions (CM2)

b.goodrich@utexas.edu

Bio

Brendan Goodrich is enrolled in the Community and Regional Planning master's program at the University of Texas at Austin. He graduated from Cornell University with a bachelor's degree in psychology and background courses in Spanish and business. Before entering the graduate program, Brendan worked in such diverse fields as traffic engineering, psychology, case management, hospitality, ecotourism, and conservation geographic information system research in Mexico. He is currently a GRA for Administration, playing an integral role in the development and implementation of budget and bookkeeping processes for the CM2 project.

Degree and Graduation Date (or Anticipated Date)

Master's candidate in community and regional planning at the University of Texas at Austin, May 2018.

Preferred Career after Graduation

Brendan plans to pursue a career in consulting.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Regional transit-oriented development.

Primary Mode(s)

Public transit, multimodal

Top Accomplishment in 2017

As the first administrative GRA on the CM2 project, Brendan established core processes for CM2 budgeting, including developing all budget templates and drafting Program Progress Performance Reports for Year 1. Following an extensive quality control and a review of Year 1 and Year 2 budgets, he is considered to be the most qualified GRA on the CM2 project.

Thesis Title and Summary

NA

Scott Kilgore

University of Texas at Austin

Center for Advanced Multimodal Mobility Solutions and Education (CAMMSE) at University of North Carolina at Charlotte

scottkilgore@utexas.edu

Bio

Scott Kilgore graduated from the University of Colorado Boulder in 2016 with a bachelor's degree in civil engineering and a minor in business. As an undergrad, he worked as a resident advisor and was a member of the National Residence Hall Honorary. Scott will be graduating with his master's degree from UT Austin this fall. He served as the 2016-2017 Secretary of the University of Texas ITE/ITS student chapter.

Degree and Graduation Date (or Anticipated Date)

Scott received a master's degree from the University of Texas at Austin in December 2017.

Preferred Career after Graduation

Scott plans to pursue a career in the private sector.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Public transportation planning.

Primary Mode(s)

Public transit

Top Accomplishment in 2017

Scott helped the UT Austin ITE/ITS student chapter win Student Chapter of the Year at the annual TexITE meeting.

Thesis Title and Summary

"Modeling Access Mode Choices for Commuter Rail Riders in Austin, Texas."

Revealed preference on-board survey data were collected and used to model access mode decision-making for commuter rail riders in Austin, Texas.

Dilip Mistry

North Dakota State University

Small Urban and Rural Transit Center

dilip.mistry@ndsu.edu

Bio

Dilip Mistry is a PhD student in the Department of Transportation & Logistics within the College of Business at North Dakota State University. He holds a master's degree in computer science from North Dakota State University and a bachelor's degree in naval architecture and marine engineering from Bangladesh University of Engineering and Technology. As a graduate research assistant, he has worked on several research projects such as the Grain Flow GIS Prototype Model, Rail Cost Model, and Statewide Travel Demand Passenger Model. Currently, he is working on his dissertation proposal on State of Good Repair on Transportation Systems by the application of machine learning algorithms.

Degree and Graduation Date (or Anticipated Date)

Dilip will receive a PhD from North Dakota State University in December 2018.

Preferred Career after Graduation

Dilip plans to pursue a career in academia.

Broad Research Interest Area

Intelligent transportation systems.

Specific Research Area

Machine learning algorithms, transit state of good repair, and travel demand modeling.

Primary Mode(s)

Public transit

Top Accomplishment in 2017

Dilip developed the North Dakota Statewide Travel Demand Model using CUBE and ArcGIS. He led a fundraising event for Distressed Children and Infant International–North Dakota Chapter and raised money for underprivileged children in Bangladesh.

Thesis Title and Summary

"Building a Predictive Model on State of Good Repair by Machine Learning Algorithm on Nationwide Transportation Systems."

Maintaining transit assets in a state of good repair has become a strategic goal for the U.S. Department of Transportation and Federal Transit Administration. Therefore, transit agencies require an intelligent predictive model that will help predict when a transit asset needs to be rehabilitated and replaced, and make decisions on investments and priorities to maintain state-of-good-repair needs. This research will determine the scope of the issue in terms of the required investment to achieve a state of good repair in transit systems, and the predictive models will help agencies solve the critical challenges of funding and maintaining a state of good repair.

Stefan Pougatchev

New York Institute of Technology (NYIT) School of Engineering & Computing Sciences

University Transportation
Research Center
at City College of New York

Stefan.Pougatchev@gmail.com

Bio

Stefan Pougatchev completed a bachelor of science degree in electrical engineering technology in 2016 at New York Institute of Technology (NYIT). He is currently a graduate student at NYIT, pursuing a master's degree in energy management. Stefan's main passions are robotics, renewable energy, and STEM education. During his undergraduate career, Stefan participated in multiple robotics competitions by the NYIT IEEE chapter and was a mentor for Calculus 1 and 2. Stefan also interned for Con Edison, Inc., where he monitored network transformers for potential failures. In addition to his work experience, Stefan started a robotics camp (Engineerify), offering a robotics summer camp for children in elementary to high school.

Degree and Graduation Date (or Anticipated Date)

Stefan received a master of science degree in December 2017.

Preferred Career after Graduation

Stefan will continue his studies for a PhD.

Broad Research Interest Area

Transportation planning, intelligent transportation systems.

Specific Research Area

Electric bus systems, light rail systems, car- and bike-sharing programs.

Primary Mode(s)

Public transit

Top Accomplishment in 2017

Stefan was selected among various candidates to be the first NYIT recipient of the AITE scholarship because of his service in supporting STEM education, not only by mentoring fellow students but also by attracting and inspiring the next generation to pursue STEM fields (e.g., via a STEM/robotics summer camp).

Thesis Title and Summary

"Transportation Study of the Nassau Hub."

Stefan's thesis focuses on the Nassau Hub Transportation Study. His research concentrates on implementing a car- and bike-sharing program within the study area of Nassau County, Long Island, NY. In addition, he is preparing a report that includes strategies for reducing carbon emissions and traffic congestion while improving transportation within the hub.

Aaron Vogel

SanJose State University

Mineta Transportation Institute

aaronjvogel@gmail.com

Bio

Aaron Vogel completed a bachelor's degree in business management in 2014 and is currently a graduate student at San José State University in the master of science in transportation management program, and is set to graduate in 2018. Aaron has studied several best practices in multimodal operations in Norway, Paris, and throughout the U.S. Aaron has been involved with every mode of transit operations from small to big, and he has spearheaded several service improvement efforts. In 2017, Aaron was selected as one of Mass Transit Magazine's Top 40 Under 40.

Degree and Graduation Date (or Anticipated Date)

Aaron will receive a master's degree in transportation management from San Jose State University in June 2018.

Preferred Career after Graduation

He plans to continue for a PhD, and later work in academia or in the public sector as a consultant.

Broad Research Interest Area

Transportation planning, transport policy.

Specific Research Area

Demand transit.

Primary Mode(s)

Public transit

Top Accomplishment in 2017

Aaron was a guest speaker on First and Last Mile solutions, restructuring and rebranding VTA's Paratransit program, and nominated as one of Mass Transit Magazine's "Top 40 under 40."

Thesis Title and Summary

NA

James Aranda

University of Texas Rio Grande Valley (UTRGV)

University Transportation Center for Railway Safety (UTCRS)
at University of Texas Rio Grande Valley

james.aranda01@utrgv.edu

Bio

James Aranda is currently enrolled in the mechanical engineering master's program at the University of Texas Rio Grande Valley. He graduated summa cum laude from UTRGV's undergraduate mechanical engineering program in fall 2016. James joined the UTCRS research team in spring 2016, working on a bearing health monitoring system, in addition to designing and manufacturing a dynamic testing rig for railway bearings. In spring 2017, as part of his graduate studies, James began working on an electrically conductive thermoplastic polyurethane/carbon nanofiber composite for railway applications. He also coauthored a paper that compares wayside detection data acquired in the laboratory to data acquired from field service.

Degree and Graduation Date (or Anticipated Date)

Master's candidate in mechanical engineering from the University of Texas Rio Grande Valley, December 2018.

Preferred Career after Graduation

James plans to pursue a career in the private sector.

Broad Research Interest Area

Freight, materials, intelligent transportation systems.

Specific Research Area

Onboard bearing condition monitoring systems, nanofiber composites and materials, transportation, wayside detection systems.

Primary Mode(s)

Rail, multimodal

Top Accomplishment in 2017

James's led a team of engineers in designing and manufacturing a dynamic testing rig for railway bearings. He was also selected by the mechanical engineering faculty to receive the Undergraduate Student of the Year Award, and was awarded three competitive scholarships.

Thesis Title and Summary

"Microstructural Influences on the Mechanical and Electrical Properties of Carbon Nanofiber/Thermoplastic Polyurethane Composites."

The purpose of James's graduate thesis is to develop an electrically and thermally conductive steering pad for railway applications using a thermoplastic polyurethane/carbon nanofiber composite. The microstructure of this composite will be analyzed and findings used to enhance its mechanical, thermal, and electrical properties.

Ahmed Jasem Al-Basha

New Mexico State University

Transportation Consortium of South Central States
at Louisiana State University

ajbasha@nmsu.edu

Bio

Ahmed Al-Basha completed a bachelor's degree in civil engineering in August 2015 from New Mexico State University (NMSU) and continued as a master's degree student. During his bachelor's degree studies, Ahmed worked as an undergraduate research assistant on an ultra-high performance concrete (UHPC) topic. Ahmed continued working on UHPC topics during his master's degree work, which has included using UHPC tiles as cladding for normal strength concrete elements. He was hired on an UHPC overlay project to train new graduate students, lead the literature review, and help initiate testing. He has had two international conference abstracts accepted, and presented one of his papers in Hungary.

Degree and Graduation Date (or Anticipated Date)

Ahmed received a master's degree in civil engineering from New Mexico State University in December 2017.

Preferred Career after Graduation

Ahmed plans to work as a consultant in the private sector, and pursue a PhD at a later date.

Broad Research Interest Area

Materials.

Specific Research Area

Concrete materials, bridge engineering, bridge preservation, sustainability.

Primary Mode(s)

Road

Top Accomplishment in 2017

Ahmed published a conference paper that was presented in Hungary in 2017, and has an abstract accepted for an ACI conference in Beijing in 2018.

Thesis Title and Summary

"Durability of Concrete Cladded with Locally Produced UHPC Cured at Elevated Temperatures."

UHPC tiles were produced with heat curing and used as cladding for normal strength concrete specimens. Durability of the cladded specimens was improved by as much as 45 percent in comparison to uncladded specimens.

Kiriakos Amiridis

University of Kentucky

Southeastern Transportation Center (STC)
at University of Tennessee

kiriakos.amiridis@uky.edy

Bio

Kiriakos Amiridis is currently enrolled in the Civil Enginering doctoral program at the University of Kentucky. He received a master's degree (also from Kentucky) and a bachelor's degree in Rural and Surveying Engineering from the National Technical University of Athens (Greece). Kiriakos has published his research findings on highway geometric designs incorporating three-dimensional (3-D) elements and controls during the design process and received awards for this modeling rationale. He has also researched crash analysis issues and is currently identifying the link between 3-D geometric highway elements and road safety.

Degree and Graduation Date (or Anticipated Date)

PhD candidate in civil engineering at the University of Kentucky, May 2018.

Preferred Career after Graduation

Kiriakos plans to pursue a career in academia.

Broad Research Interest Area

Infrastructure systems, intelligent transportation systems.

Specific Research Area

Highway geometric design, crash data analysis, statistics.

Primary Mode(s)

Road

Top Accomplishment in 2017

Kiriakos's master's thesis was published in the Transportation Research Record (TRR) Journal and was presented at the 96th Annual Transportation Research Board Meeting (TRB), January 2017.

Amiridis, K., Stamatiadis, N., Kirk, A., "Safety-Based Signalized Intersection Left-Turn Phasing Decisions," Journal of the Transportation Research Board, 2017.

Thesis Title and Summary

"Safety-Based Guidelines for Left-Turn Phasing Decisions with Negative Binomial Regression."

The focus of Kiriakos's thesis was developing models to estimate the safety impacts of left-turn phasing schemes at urban intersections in Kentucky. These models can be used to determine whether a permitted or protected-only phase is appropriate for the intersection when considering safety performance.

Golnush Masghati Amoli

University of Maryland

National Center for Strategic Transportation Policies, Investments, and Decisions

golnush.masghati@gmail.com

Bio

Golnush Masghati Amoli has been working at the University of Maryland's (UMD) Center for Advanced Transportation Technology as a graduate research assistant since starting work on her PhD in fall 2013. She has been involved in two projects. One was funded by the National Cooperative Highway Research Program, and involved estimation of highway capacity reduction during different incident scenarios. The other project, funded by the State Highway Administration (SHA), aimed at developing a system to monitor travel time reliability of a freeway facility under different weather, incident, and congestion scenarios. Before joining UMD, Golnush spent one year at Old Dominion University as a research assistant where she worked on drivers' behavior data to model the level of volatility in instantaneous driving decisions.

Degree and Graduation Date (or Anticipated Date)

Golnush will receive a PhD from the University of Maryland in May 2018.

Preferred Career after Graduation

Golnush plans to pursue a career in consulting.

Broad Research Interest Area

Transportation planning, freight.

Specific research area

Transportation system optimization and logistics, machine learning techniques in transportation, performance measurement and monitoring.

Primary Mode(s)

Road

Top Accomplishment in 2017

Golnush successfully defended her PhD dissertation proposal and became a PhD candidate. She also developed a Travel Time Reliability Monitoring System based on the SHRP2 Reliability Data and Analysis Tools and implemented it on major freeways in Maryland for a project funded by SHA.

Thesis Title and Summary

"Mixed Fleet Time Dependent Green Vehicle Routing Problem with Time Window."

Developed a mathematical mixed integer linear programming model and an efficient heuristic algorithm to minimize the fixed and daily emissions cost of a parcel delivery company's operations considering a mixed fleet of conventional and electric trucks, and solved the model for different green logistics policies imposed by authorities.

William Baker

University of Delaware

Delaware Center for Transportation
at University of Virginia

bakerwil@udel.edu

Bio

William Baker is currently enrolled in the Geotechnical Engineering doctoral program at the University of Delaware. He completed his bachelor's degree in civil engineering (also at the University of Delaware) in 2015. William's research focus is Continuous Compaction Control (CCC). As part of his doctoral research, he has been monitoring the compaction process for the first CCC compaction roller in the state of Delaware, and is helping the Delaware Department of Transportation (DelDOT) develop a specification for using CCC compaction rollers. William is also an Executive Committee member for the Geo-Institute Student Leadership Council.

Degree and Graduation Date (or Anticipated Date)

Doctoral candidate in Geotechnical Engineering at Delaware University, spring 2020.

Preferred Career after Graduation

William plans to pursue a career in academia.

Broad Research Interest Area

Intelligent transportation systems, materials.

Specific Research Area

Continuous compaction control.

Primary Mode(s)

Road

Top Accomplishment in 2017

William coauthored a paper "Assessing Soil Compaction Using Continuous Compaction Control and Location-Specific in Situ Tests" published in Automation in Construction.

Thesis Title and Summary

"Implementation of Smart Equipment in Field Construction."

William's dissertation research investigates the benefits of Continuous Compaction Control during active field construction and develops methodologies for determining best practice procedures for Continuous Compaction Control equipment.

Natalia Barbour

University of South Florida

Center for Transportation, Environment, and Community Health (CTECH)
at Cornell University

barbourn@mail.usf.edu

Bio

Natalia Barbour received her master's of science in engineering with a nearly perfect GPA from the University of Alabama at Birmingham. She is a third year PhD student at the University of South Florida (USF). She has met all the course requirements and is currently focusing on completing her dissertation in the area of shared mobility with an emphasis on user adoption of shared autonomous vehicles and shared bicycle systems. She will advance to PhD candidacy in the fall of 2017. Additionally, Natalia was an intern at the Florida Department of Transportation and is also a founder and president of the Women in Transportation Society student chapter at USF.

Degree and Graduation Date (or Anticipated Date)

Natalia will receive a PhD from the University of Florida in fall 2019.

Preferred Career after Graduation

Natalia plans to pursue a career in academia.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Planning for travel demand and travel behavior in the field of shared mobility transportation systems.

Primary Mode(s)

Road

Top Accomplishment in 2017

Natalia authored an article titled "Shared Autonomous Vehicles and Their Potential Impact on Household Ownership: An Exploratory Empirical Assessment" that was submitted for publication in the International Journal of Sustainable Transportation, and it is still awaiting review. She performed the statistical and econometric analysis together with the coauthors.

Thesis Title and Summary

"Understanding the User Perception and Adoption Patterns of Shared Mobility Systems: Shared Autonomous Vehicles and Shared Bicycle Systems."

The research focuses on the adoption patterns of shared mobility systems. Random parameter statistical and econometric models are estimated to predict and understand travel behavior and adoption of shared autonomous vehicle systems and shared bicycle systems.

Richard Driscoll

University of South Florida

Center for Urban Transportation Research

rdriscoll@mail.usf.edu

Bio

Richard Driscoll is a master's student at the University of South Florida (USF) pursuing a degree in civil and environmental engineering with a concentration in transportation engineering. Richard has been working with the Center for Urban Transportation Research (CUTR) as a research assistant on their Mobility Policy Research team since 2015. He has worked closely with the Florida Department of Transportation (FDOT) producing trends analysis for various transportation modes, with a focus on transit and vehicle mobility. He has most recently worked in motorcycle safety, and has had a hand in producing the Florida 2015 Motorcycle Safety Study, funded through FHWA.

Degree and Graduation Date (or Anticipated Date)

Richard will receive a master's degree from the University of South Florida in July 2018.

Preferred Career after Graduation

Richard plans to pursue a career in the public sector.

Broad Research Interest Area

Transportation planning.

Specific Research Area

Trends analysis, transportation and economics, socioeconomic demographics.

Primary Mode(s)

Road

Top Accomplishment in 2017

Richard's top accomplishments include USF-ITE Secretary, Traffic Bowl District Champion, Transportation Research Board paper acceptance, and CUTR Student Poster Competition.

Thesis Title and Summary

"National Vehicle Miles Traveled as it Relates to Income and Household Vehicle Availability."

Changes in vehicle-miles traveled (VMT) have long been a topic of concern in transportation. This paper seeks to explore those socioeconomic factors affecting VMT, specifically income and household vehicle availability.

Kayla Fleskes

Oregon State University

Pacific Northwest Transportation
Consortium (PacTrans)
at University of Washington

fleskesk@oregonstate.edu

Bio

Kayla Fleskes is currently enrolled in the Civil Engineering master's program at Oregon State University (OSU). She has a 4.0 GPA in graduate course work and also graduated summa cum laude from OSU's undergraduate program. Kayla is a published researcher and works in the OSU Driving and Bicycling Simulator Laboratory, studying transportation safety and human factors. She has also completed two internships with private consulting firms focusing on transit and transportation planning. Kayla is the current President of the OSU Institute of Transportation Engineers (ITE) Student Chapter. Amongst other accomplishments she was also an NCAA Division I athlete on the OSU Track and Field team.

Degree and Graduation Date (or Anticipated Date)

Kayla will receive a master's degree in civil engineering from Oregon State University in June 2018.

Preferred Career after Graduation

Kayla plans to pursue a career in consulting.

Broad Research Interest Area

Traffic engineering, intelligent transportation systems.

Specific Research Area

Autonomous vehicles.

Primary Mode(s)

Road

Top Accomplishment in 2017

Kayla received the Oregon State University Civil Engineering Student of the Year award in 2016. She was recognized for her successful academic performance, experience as an intern and a URA, participation in student groups, and accomplishments as a D1 NCAA student athlete.

Thesis Title and Summary

"Implications of Autonomous Vehicle Transitions of Control on Pedestrian and Bicyclist Safety at Signalized Intersections."

Disruptive technologies significantly impact ways in which transportation services are delivered. One such technology—automated vehicles—has transformative potential. Kayla's graduate thesis investigates the interaction of autonomous vehicles and bicycles at signalized intersections and identifies several potential issues that warrant further consideration.

Trevor Gardner

Utah State University

Center for Advanced Infrastructure
and Transportation (CAIT)
at Rutgers University

trevorgardner24@gmail.com

Bio

Trevor Gardner completed bachelor's and master's degrees in civil engineering in 2017 at Utah State University. During his time as a graduate student, Trevor worked on research pertaining to electrified roadways. Specifically, his research evaluated the durability and structural performance of embedded inductive coils in roadways. Throughout the course of his research, Trevor collaborated with electrical and mechanical engineering students to integrate these systems into the roadways. Additionally, Trevor helped present these findings at several transportation conferences. Trevor also mentored several undergraduate students in the testing and structural evaluation of embedded electrical systems.

Degree and Graduation Date (or Anticipated Date)

Trevor received master's and bachelor's degrees from Utah State University in December 2017.

Preferred Career after Graduation

Trevor plans to work in consulting.

Broad Research Interest Area

Infrastructure systems, intelligent transportation systems.

Specific Research Area

NA

Primary Mode(s)

Road

Top Accomplishment in 2017

Trevor took part in the SELECT conference, presenting research findings to peers on electrified roadways.

Thesis Title and Summary

"Wireless Power Transfer Roadway Integration."

Trevor's thesis evaluates the electrical performance of inductive coils embedded in roadway materials. The structural performance of these embedded systems is evaluated and several conclusions are made.

Regan Hansen

University of Idaho

Pacific Northwest Transportation
Consortium (PacTrans)
at University of Washington

hans9380@vandals.uidaho.edu

Bio

Regan Hansen completed his undergraduate degree (magna cum laude) from the University of Idaho and received the Civil and Environmental Engineering (CEE) top student award. He is currently a graduate student with a focus on driver passing behavior. Based on his current research findings, Regan has made two presentations and will be submitting his findings for publication at the end of the study. Regan worked as a teaching assistant and his innovative ideas on homework self-grading by students is under consideration for an upcoming American Society of Engineering Education (ASEE) conference. In addition, Regan has also worked for the Washington State Department of Transportation as an Assistant Inspector.

Degree and Graduation Date (or Anticipated Date)

Regan received a master's degree from the University of Idaho in December 2017.

Preferred Career after Graduation

Regan plans to pursue a career in the public sector.

Broad Research Interest Area

Traffic engineering.

Specific Research Area

Passing choice, passing safety, microsimulation of two-lane two-way rural highways.

Primary Mode(s)

Road

Top Accomplishment in 2017

Regan received the University of Idaho Department of Civil Engineering Outstanding Senior award.

Thesis Title and Summary

"Effects of Horizontal Curvature, Vertical Curvature, and Guardrail on Passing Choice and Safety."

Regan's dissertation research assesses passing behavior on rural two-lane highways using a driving simulator. A mixed effects model was developed to infer the effects of highway geometry on passing choice. The safety outcomes of passing maneuvers under different geometric conditions were compared.

Eli S. Hernandez

Missouri University of Science and Technology

Research of Concrete Applications for Sustainable Transportation (RE-CAST)

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Bio

Eli S. Hernandez is a PhD candidate at Missouri University of Science and Technology in Rolla, Missouri. He received his master's degree in structural engineering and bachelor's degree in civil engineering from Universidad de los Andes in Venezuela. His dissertation focuses on "Strength Evaluation of Bridges through Load Testing." Eli was in charge of monitoring by field tests the first bridge implementation using high-volume fly ash and high-strength self-consolidating concrete built by the Missouri Department of Transportation. Previously, he worked as a structural engineer at ING PROACTIVA, Venezuela (2008-2012) designing steel and reinforced concrete structures, and at Universidad de los Andes, Venezuela (2006-2008) as an assistant professor.

Degree and Graduation Date (or Anticipated Date)

Eli will receive a PhD from the Missouri University of Science and Technology in May 2018.

Preferred Career after Graduation

Eli plans to pursue a career in academia or the public sector.

Broad Research Interest Area

Infrastructure systems, materials.

Specific Research Area

Bridge performance assessment, reinforced and prestressed concrete members, repairing and strengthening of infrastructure systems.

Primary Mode(s)

Road

Top Accomplishment in 2017

Eli helped write and edit the technical report "Self-Consolidating Concrete (SCC) and High-Volume Fly Ash Concrete (HVFAC) for Infrastructure Elements: Implementation," published by the Missouri Department of Transportation. He helped write and edit the article "Diagnostic Test for Load Rating of a Prestressed SCC Bridge," ACI Committee 342 Special Publication, as well as eight additional technical publications.

Thesis Title and Summary

"Strength Evaluation of Bridges through Load Testing."

The strength evaluation and load test program proposed includes a comprehensive instrumentation of Bridge A7957's main supporting members, static and dynamic load tests, identification of hardened mechanical properties of the materials employed in each bridge component, and refined finite element analyses modeling static load test configurations acting on Bridge A7957's structure. This evaluation protocol presents a unique opportunity to monitor Bridge A7957's structural performance from its pre-construction stage, post-construction, and throughout the service life of the structure.

Jonathan Hochmuth

Western Michigan University

Transportation Research Center for Livable Communities (TRCLC)

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Bio

Jonathan Hochmuth is currently enrolled in the master's program at Western Michigan University. He received his bachelor's degree in Behavioral Science (also from Western Michigan). For the past four years, Jonathan has researched gateway configurations of R1-6 in-street signs. He has also been part of a team researching gateway configuration variables and publishing research findings. In addition, Jonathan has mentored several undergraduate students who have since entered graduate school and are researching pedestrian safety.

Degree and Graduation Date (or Anticipated Date)

Master's candidate from Western Michigan University, April 2018.

Preferred Career after Graduation

Jonathan plans to pursue his PhD after completing his master's program, and then work in academia.

Broad Research Interest Area

Transport policy, traffic engineering.

Specific Research Area

Pedestrian safety.

Primary Mode(s)

Road

Top Accomplishment in 2017

Jonathan was part of a TRCLC-funded research team to design, conduct, and write up findings on advanced placement of the gateway configuration of R1-6 signs. The focus was the effects on the yielding distance of motorists. Research findings will be presented at the Transportation Research Board 2018 Annual Meeting, and are being revised for publication.

Thesis Title and Summary

"A Comparison of the Efficacy of Wide and Narrow Gateway Configurations of the In-street Sign on Driver Yielding to Pedestrians."

Jonathan's graduate thesis investigates the varied placement of in-street signs in a gateway configuration (wide versus narrow gap between signs) and measures the effect on yielding right of way to pedestrians. A parametric analysis of gap between signs in two-foot intervals (18 feet to 12 feet) show there is an inverse relationship between gap width and yielding (i.e., narrower gaps produce more yielding and wider gaps produce less).

Nur Hossain

University of Oklahoma

Southern Plains Transportation Center

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Bio

Nur Hossain received his bachelor's degree in civil engineering from the University of Engineering and Technology in Dhaka, Bangladesh, and master's degree and PhD in civil engineering from the University of Oklahoma in Norman in 2010 and 2017, respectively. He worked for two geotechnical engineering firms in Oklahoma, Professional Services Industries, Inc. from 2011 to 2015 and Kleinfelder from 2015 to 2017, as a project manager. While working for Kleinfelder, he started the company's Greater Oklahoma City operation and was responsible for business development, client management, revenue generation, and project management. As a practicing geotechnical engineer, he was involved in a variety of projects in transportation, energy, and municipality sectors. Recently, Nur moved to Colorado to serve as a senior project manager of Geocal. His research interests include pavement design, local calibration, materials, and laboratory and field testing. He is a native of Bangladesh and is a naturalized citizen of the U.S.

Degree and Graduation Date (or Anticipated Date)

Nur received a PhD in civil engineering from the University of Oklahoma in Norman, 2017.

Preferred Career after Graduation

NA

Broad Research Interest Area

Infrastructure systems and materials.

Specific Research Area

Pavement design, local calibration, materials, and laboratory and field testing.

Primary Mode(s)

Road

Top Accomplishment in 2017

Nur designed foundations for a 16-span, 2,200-ft-long bridge over the North Canadian River in Oklahoma.

Thesis Title and Summary

"Mechanistic Input Parameters and Model Calibration for Design and Performance Evaluation of Flexible Pavements in Oklahoma."

In this study, actual traffic and field performance data (rut, crack, roughness) were collected from an instrumented pavement section on I-35 near Purcell, Oklahoma for several years. Outcomes of this study are expected to be useful for predicting service life of existing pavements, based on rutting.

Amanda Johnson

Carnegie Mellon University

Mobility 21 Institute

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Bio

Amanda Johnson is a second-year master's degree candidate for public policy and management at Carnegie Mellon University (CMU). Originally from Ames, Iowa, Amanda completed her undergraduate degree at the University of Nebraska-Lincoln in political science and public policy. After graduation, she worked as the legislative aide to Nebraska State Senator Matt Hansen. In her studies at CMU, Amanda's concentration is environmental policy with special interest in transportation and connected and automated vehicles. Her summer internship involved planning Pennsylvania's first Automated Vehicle Summit as a policy intern at PennDOT. Amanda is currently a research assistant at Traffic21/Mobility21.

Degree and Graduation Date (or Anticipated Date)

Amanda will receive a master's degree from Carnegie Mellon University in May 2018.

Preferred Career after Graduation

Amanda plans to pursue a career in the public sector.

Broad Research Interest Area

Transport policy, intelligent transportation systems.

Specific Research Area

Highly autonomous and connected vehicle policy.

Primary Mode(s)

Road

Top Accomplishment in 2017

Amanda planned Pennsylvania's first-ever Autonomous Vehicle Summit in State College, PA.

Thesis Title and Summary

"Cashless Toll Collection: The Fast Path to Privacy Loss?"

A study on Pennsylvania's E-ZPass toll system and its privacy implications, this paper evaluates the PTC's transition from cash-only lanes to toll-by-plate. The paper recommends the PTC develop a long-term data retention policy and encrypt all transportation data, and the state of Pennsylvania establish license plate numbers as a form of personally identifiable information.

Evan Jordan

University of Nevada, Reno

Center for Civil Engineering Earthquake Research (CCEER)
at Florida International University

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Bio

Evan Jordan received a bachelor of science degree in civil engineering from the University of Nevada, Reno (UNR) and is currently pursuing a master's degree in civil engineering with a focus on structural and earthquake engineering, also from UNR. His research topic is focusing on the dynamic and seismic behavior of mechanical couplers for accelerated bridge construction (ABC) connections. He is devising a new apparatus and novel testing protocol for dynamic loading (with cyclic load reversals) for mechanical couplers for use in the plastic hinge region of a bridge column. As part of his affiliation with the ABC-UTC, Evan has assisted in the construction of a bridge that featured innovative ABC connections over 70 feet long. Evan was also an intern for the specialized seismic isolation firm (Dynamic Isolation Systems, DIS) where he assisted in the analysis of hysteresis loops for isolation bearings and compiled detailed reports regarding their performance.

Degree and Graduation Date (or Anticipated Date)

Evan will receive a master's degree from the University of Nevada, Reno in spring 2018.

Preferred Career after Graduation

Evan plans to pursue a career in the private sector.

Broad Research Interest Area

Infrastructure systems.

Specific Research Area

Accelerated bridge construction, plastic hinge splicing, material modelling, shape-memory alloys, performance of varying couplers.

Primary Mode(s)

Road

Top Accomplishment in 2017

Evan assisted in the construction of a large-scale ABC bridge test.

Thesis Title and Summary

"Proposed Guidelines for Testing and Analysis of Mechanically Reinforced Bar Splices for Use in Moderate and High Seismic Regions."

The study is concerned with developing a unified acceptance criteria for testing mechanical bar splices for use in earthquake-resistant ABC column connections. Additional proposed guidelines for testing Copper-Aluminum-Manganese shape-memory alloys will also be presented.

Grant John Karr

University of Hawaii at Manoa

Center for Highway Pavement Preservation at Michigan State University

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Bio

Grant John Karr completed his bachelor's degree in civil engineering at the University of Michigan in 2014. After graduation, he worked for the land development consulting firm, Bury, Inc. (now Stantec) in Austin, Texas. In the summer of 2016, Grant moved to Hawaii and began working toward a master's degree in civil engineering from the University of Hawaii. He works as a graduate assistant in the pavement laboratory, providing assistance with research projects as well as supervising undergraduate and high school students.

Degree and Graduation Date (or Anticipated Date)

Grant will receive a master's degree from the University of Hawaii at Manoa in May 2018.

Preferred Career after Graduation

Grant plans to work in consulting or in the private sector after graduation.

Broad Research Interest Area

Infrastructure systems, materials.

Specific Research Area

Pavement materials, uniaxial fatigue testing of asphalt mixes.

Primary Mode(s)

Road

Top Accomplishment in 2017

Grant served as a teaching assistant for an undergraduate statistics course, assisted with research work in the pavement lab, and maintained a 4.0 GPA since joining UH in six graduate-level courses.

Thesis Title and Summary

"Development of a Thin, Tapered Cross-Section Specimen for Use in Uniaxial Fatigue Testing of Hot Mix Asphalt."

Uniaxial fatigue testing of asphalt mixtures is currently performed on ±101.6 mm cylindrical specimens with uniform cross section. These specimens often exhibit failures near the interface due to stress/strain concentrations arising from the glued connection. The proposed specimen orientation results in peak, uniform strains near mid-height and allows for testing of field samples constructed in as thin as 1.0 inch lifts.

Matthew Klegseth

Missouri University of Science and Technology

Inspecting and Preserving Infrastructure through Robotic Exploration University Transport Center (INSPIRE-UTC)

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Bio

Matthew Klegseth received his bachelor's degree in civil engineering and architectural engineering in May 2016 from Missouri University of Science and Technology. After completimg these degrees, Matthew enrolled in the doctoral program where he researched structural health monitoring issues and fiber-optic sensor technology. Matthew interned at the National Institute of Standards and Technology in 2014 where he worked on a project related to the impact of firebrands on structures in the wildland-urban interface. In 2015, he interned at Henderson Engineers where he worked on heating, ventilation, and air conditioning (HVAC) design.

Degree and Graduation Date (or Anticipated Date)

Matthew will receive a PhD from the Missouri University of Science and Technology in May 2020.

Preferred Career after Graduation

Matthew plans to pursue a career in academia.

Broad Research Interest Area

Infrastructure systems, materials.

Specific Research Area

Fiber-optic sensors.

Primary Mode(s)

Road

Top Accomplishment in 2017

Matthew helped revise/edit a conference paper that was submitted to the International Workshop on Structural Health Monitoring.

Thesis Title and Summary

"Applications of Distributed Fiber Optic Sensors in Structural Health Monitoring."

The goal of this study is to identify areas in structural health monitoring where fiber-optic sensing technology can be applied. These sensors are being used to improve understanding of strain and temperature effects in structural systems.

Nicholas Liccardo

University of Nevada, Reno

Center for Advanced Transportation Education and Research (CATER)

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Bio

Nicholas Liccardo completed his bachelor's degree in civil engineering in spring 2016 at the University of Nevada, Reno (UNR), and is currently a graduate student at UNR. Nick has researched many different areas including pedestrian safety, wildlife influence on drivers, pavement impact on vehicles, and benefit cost analysis. In 2016, Nick presented his research at a conference in Las Vegas. Nick is consistently mentoring other students. He works with undergraduates when they need help on research, and he introduces high school students to transportation engineering through a presentation and lab tour every Friday.

Degree and Graduation Date (or Anticipated Date)

Nick received a master's degree from the University of Nevada, Reno in December 2017.

Preferred Career after Graduation

Nick plans to pursue a career in the public sector.

Broad Research Interest Area

Intelligent transportation systems, traffic engineering.

Specific Research Area

Pavement roughness influence on vehicle speed at different levels of service.

Primary Mode(s)

Road

Top Accomplishment in 2017

Nick wrote an abstract on his research that was presented at the 2016 Fall Transportation Conference in Las Vegas.

Thesis Title and Summary

"Methodology for Roughness-Speed Relationship with SHRP2 Naturalistic Driving Study Data."

Nick's thesis looks at the impact of pavement roughness on a driver's speed, and also looks at it based on LOS. NDS data was used for the task, which gave Nick a unique ability to do the research because of the available data.

Rebecca Naumann

University of North Carolina at Chapel Hill

Collaborative Sciences Center
for Road Safety

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Bio

Rebecca Naumann, MSPH, is a PhD candidate in epidemiology and Royster Fellow at the University of North Carolina at Chapel Hill. Rebecca has a bachelor of science in environmental health (University of Georgia) and a master of science in public health (MSPH) (Emory University). Prior to beginning her doctoral training, Rebecca worked as an epidemiologist on the Transportation Safety Team in the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention. Rebecca has engaged in transportation safety research for more than 10 years. She has published 22 articles, coauthored three book chapters, and given numerous oral and poster presentations to domestic and international audiences in the field of transportation safety. She has been actively involved in applied road safety research with the Collaborative Sciences Center for Road Safety (CSCRS), specifically related to examining organizational networks of transportation safety partners.

Degree and Graduation Date (or Anticipated Date)

MSPH completed in May 2007.

PhD received in December 2017.

Preferred Career after Graduation

Rebecca plans to pursue a career in academia.

Broad Research Interest Area

Transport policy.

Specific Research Area

Traffic safety policy.

Primary Mode(s)

Road

Top Accomplishment in 2017

Rebecca completed her dissertation and PhD in epidemiology.

Thesis Title and Summary

"Assessing Sustained and Differential Impacts of North Carolina's Medicaid "Lock-In" Program."

One strategy that nearly all states use to address potential misuse of prescription drugs (e.g., opioids) are Medicaid "lock-in" programs (MLIPs). MLIPs identify beneficiaries demonstrating potential overutilization of prescription drugs and control their access. There has been little research examining the impact of MLIPs. This dissertation: 1) examined the sustained impact of the North Carolina MLIP on dispensed prescription drugs and dosages of opioids dispensed, and 2) examined whether trajectories of prescription opioid dosages differed across time prior to, during, and following release from the MLIP for different strata of the population.

Rahul Patel

University of Texas at Austin

Data-Supported Transportation Operations and Planning (D-STOP) Center

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Bio

Rahul Patel received his bachelor's degree in civil engineering from the University of Texas at Austin, and is currently enrolled in the University's Civil Engineering master's program. He has worked on the Texas Department of Transportation's UT Autonomous Vehicle Project at both the undergraduate and graduate levels, performing simulation and traffic impact analyses of connected and automated vehicles and reservation-based intersections. Rahul co-wrote and submitted two papers on his research findings to the Transportation Research Board (TRB). In 2016, he presented one paper at TRB and published both papers.

Degree and Graduation Date (or Anticipated Date)

Master's candidate in civil engineering at the University of Texas at Austin, December 2018.

Preferred Career after Graduation

Rahul plans to pursue a career in either the consulting or private sector, working with smart transportation and connected and autonomous vehicles/infrastructures.

Broad Research Interest Area

Intelligent transportation systems.

Specific Research Area

Connected and automated vehicles and network optimization.

Primary Mode(s)

Road

Top Accomplishment in 2017

Rahul made valuable contributions to the UT Autonomous Vehicle Project, writing papers and reports describing research findings covering autonomous vehicles and intersections.

Thesis Title and Summary

"Network Modeling and Optimization of Autonomous Vehicle Behavior and Intersection Management."

Rahul's graduate thesis analyzes the effects of connected and autonomous vehicle behavior and reservation-based intersections on networks using dynamic traffic assignment. It also presents the methodology and results for the optimal placement of reservation-based and signalized intersections.

Maryam Shirinzad

Texas A&M University

Safety Through Disruption (Safe-D)
National UTC
at Virginia Polytechnic Institute and
State University

msdastgiri@gmail.com

Bio

Maryam Shirinzad completed her bachelor's and master's degrees in Iran and worked for several years before moving to the United States. She is currently a doctoral candidate at Texas A&M, where she has worked as a graduate teaching assistant for an undergraduate transportation engineering course and a graduate research assistant for the Texas Transportation Institute (TTI) Roadway Safety Program. These efforts have resulted in several reports and publications. She formerly was the president for the Institute of Transportation Engineers (ITE) student chapter at Texas A&M and currently serves as media chair for Women in Transportation (WTS)-TAMU.

Degree and Graduation Date (or Anticipated Date)

Maryam is a PhD candidate at Texas A&M University, May 2019.

Preferred Career after Graduation

Maryam plans to pursue a career in either academia or consulting.

Broad Research Interest Area

Infrastructure systems.

Specific Research Area

Big data analysis and microsimulation.

Primary Mode(s)

Road

Top Accomplishment in 2017

Maryam supervised data collection activities and coauthored an associated research report and research paper. She also developed microscopic simulation models assessing vehicle weaving activities between interchange terminal intersections and downstream signalized intersections. These models will lead to subsequent research focusing on intersection spacing, access point density, traffic volume, and roadway geometric configurations.

Thesis Title and Summary

"Using Big Data to Assess Corridor Safety Performance at Approaches to Freeway Interchanges."

Maryam's dissertation studies lane change maneuvers in the vicinity of freeway interchanges at the micro-level and assesses the safety performance of interchanges.

Tiffany Treviño

University of Nebraska-Lincoln

Mid-America Transportation Center (MATC)

ttrevino7@huskers.unl.edu

Bio

Tiffany Treviño completed a bachelor's degree in mechanical engineering in 2016 at the University of Texas-Rio Grande Valley and is currently a graduate student at the University of Nebraska-Lincoln (UNL). Tiffany participated in a research experience for undergraduates at Midwest Roadside Safety Facility (MwRSF) in 2015 and 2016, where she conducted research on railway safety by learning and using Adams MSC and LS-PrePost software to create simulations. Recently at MwRSF, Tiffany researched traffic calming elements for entry control facility threat delay and containment.

Degree and Graduation Date (or Anticipated Date)

Tiffany will receive a master's degree from the University of Nebraska-Lincoln in December 2018.

Preferred Career after Graduation

Tiffany plans to work in the public or private sector.

Broad Research Interest Area

Traffic engineering.

Specific Research Area

Traffic calming devices, speed tables, roadway curves, vehicle dynamics.

Primary Mode(s)

Road, rail.

Top Accomplishment in 2017

Tiffany's top accomplishment in 2017 was completing a project researching a nano-glass composite material for roof tiles.

Thesis Title and Summary

"Optimal Placement of Speed Tables on Roadway Curves."

The research objective was to investigate the optimal placement of speed tables on roadway curves such that threat vehicles are disrupted or delayed and occupants of non-threat vehicles do not experience excessive discomfort. Vehicle performance and handling tests were developed and analyzed in order to calibrate simulations and validate an analytical model.

Matthew Vechione

The University of Texas at El Paso

Connected Cities for Smart Mobility toward Accessible and Resilient Transportation (C2SMART) at New York University

mmvechione@miners.utep.edu

Bio

Matt Vechione completed a bachelor's degree (cum laude) in civil engineering in 2014 from the University of Texas at Tyler and is currently a PhD student at the University of Texas at El Paso (UTEP). Matt's dissertation research focuses on driver's lane changing behavior. His research project in C2SMART focuses on mobility of seniors. Matt interned with the Texas Department of Transportation in 2013 and worked for more than two years as a project engineer for Moreno Cardenas Inc., a civil engineering firm in El Paso, Texas, before pursuing his PhD with a focus on transportation at UTEP.

Degree and Graduation Date (or Anticipated Date)

Matt will receive a PhD from UTEP in May 2019.

Preferred Career after Graduation

Matt plans to pursue a career in academia.

Broad Research Interest Area

Intelligent transportation systems, traffic engineering.

Specific Research Area

Lane changing, driver behavior, connected and automated vehicles.

Primary Mode(s)

Road

Top Accomplishment in 2017

Matt received the Daniel B. Fambro Outstanding Student Paper Award from the Texas District of the Institute of Transportation Engineers for his paper "Comparisons of Discretionary Lane Changing Behavior."

Thesis Title and Summary

"Understanding and Modeling of Lane Changing Behavior Using NGSIM Data."

This research utilizes data extracted from the Federal Highway Administration's Next Generation Simulation data sets to analyze driver behavior when executing different types of lane-changing maneuvers on arterial streets and on freeways, and in different traffic conditions. This research lays the foundation for customizing lane-changing algorithms for different driving environments in connected and autonomous vehicles.

Jeremy Weiss

Morgan State University

Urban Mobility & Equity Tier 1 Center

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jeremybweiss@gmail.com

Bio

Jeremy Weiss completed his bachelor's degree in sociology and environmental studies in 2010, and earned an MPA degree in 2011, at Clark University in Worcester, Massachusetts. He is currently finishing a master's degree in city and regional planning, and hopes to continue working in the Baltimore-Washington Metropolitan Area following graduation. Jeremy has worked on a variety of research projects, including examining the impact of anthropogenic climate change on a non-automotive transit network in Maryland, electric vehicles, and efforts to establish an innovation district in West Baltimore. Jeremy currently serves as president of the Morgan Association of Planning Students (MAPS).

Degree and Graduation Date (or Anticipated Date)

Jeremy will receive a master's degree in city and regional planning from Morgan State University in May 2018.

Preferred Career after Graduation

Jeremy plans to continue his studies for a PhD, and later work in academia or the public or private sector.

Broad Research Interest Area

Transportation planning, transport policy.

Specific Research Area

Food miles; food insecurity; local economic development; modeling feasibility and demand.

Primary Mode(s)

Road

Top Accomplishment in 2017

Jeremy organized and executed a professional development institute symposium for the city and regional planning department, introducing Baltimore-based planning professionals from across all sectors (academia, nonprofit, private sector, etc.) to showcase their work and provide professional career guidance to rising planners.

Thesis Title and Summary

"Pilot Feasibility Analysis of Establishing Building-Integrated Agriculture Operations in Baltimore City."

Examining the feasibility of creating indoor agricultural projects in available Baltimore warehouse space to reduce food miles of produce and help ameliorate local food insecurity.

Alana Wilson

Georgia Institute of Technology

Center for Advancing Research in Transportation Emissions, Energy and Health (CARTEEH) at Texas A&M University

alana.wilson127@gmail.com

Bio

Alana Wilson is a second year master's thesis student at Georgia Institute of Technology. She has worked as a student research assistant for the past three years working on research projects in transportation, air quality, and alternative energy. She is currently working on a CARTEEH project focused on modeling population exposures related to emissions generated by port operations. For this project, Alana is looking at modeling idling emissions from trucks queuing outside of port gates. She is examining the location of receptor sites based on the proximity of vulnerable populations and is also conducting an accompanying population demographics spatial analysis.

Degree and Graduation Date (or Anticipated Date)

Alana received a master's degree from the Georgia Institute of Technology in December 2017.

Preferred Career after Graduation

Alana plans to work as a consultant in the private sector.

Broad Research Interest Area

Transportation planning, transport policy, infrastructure systems, and freight.

Specific Research Area

Transportation and air quality.

Primary Mode(s)

Road, air.

Top Accomplishment in 2017

Alana is presenting at the Georgia Department of Transportation and Georgia Transportation Institute Annual Transportation Research Expo.

Thesis Title and Summary

"A Preliminary Assessment of Population Exposures Resulting from Truck Idling at Port Gates."

This thesis is a contribution to a larger research effort studying emissions associated with port operations, and will help the research team with the creation of a study methodology and data analysis plan to evaluate population exposures related to port emissions. The main contributions of this thesis include population demographics mapping and an evaluation of the effect vehicle age, meteorological data, and characterization of the roughness parameter has on modeling the emissions from trucks idling at port gates.

Frank Alarcon

University of Minnesota–Twin Cities

Center for Transportation Studies

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frank.j.alarcon@gmail.com

Bio

Frank Alarcon completed a bachelor's degree in political science in 2013 at the University of Chicago and is currently a Master of Urban and Regional Planning student at the University of Minnesota–Twin Cities. Before graduate school, Frank served as a Peace Corps volunteer in El Salvador, where he focused on rural community development. As a graduate student, Frank works as a research assistant with the state and local policy program, where he has researched automated speed enforcement and speed regulation. Frank is also a planning intern at Ramsey County, MN and serves as president of the board of a community nonprofit in Minneapolis.

Degree and Graduation Date (or Anticipated Date)

Frank will receive a master's degree from the University of Minnesota-Twin Cities in May 2018.

Preferred Career after Graduation

Frank plans to work in the public sector.

Broad Research Interest Area

Transportation planning, transport policy.

Specific Research Area

Roadway regulation and safety.

Primary Mode(s)

Road, public transit.

Top Accomplishment in 2017

Frank helped write a research report that is currently undergoing peer review with the Center for Transportation Studies at the University of Minnesota. He presented the findings from this research at the 28th Annual Center for Transportation Studies Transportation Research Conference in Minneapolis in November 2017.

Thesis Title and Summary

"Toward Greater Understanding of the Relationship between Public Perceptions of Speed, Speed Laws, and Safety."

This research examined three bodies of data—state speed laws, crash data, and public perception of speed data—from U.S. DOT Region 5 to explore how these variables may relate to one another. The research concluded that better data and data reporting practices are needed for definitive conclusions to be made, but identified a strong possibility that state speed laws that are not well understood or widely obeyed by the public may be related to higher crashes and injury and fatality rates on roads.

Hanjiro Ambrose

University of California, Davis

National Center for Sustainable Transportation

hambrose@ucdavis.edu

Bio

Hanjiro Ambrose is a fourth year PhD candidate in the Department of Civil and Environmental Engineering at the University of California, Davis where he also received a master's degree in transportation technology and policy. He is the author of a small but growing number of quality research publications, and is proud to support the field through his work with the Transportation Research Board and International Society of Industrial Ecology. After graduation, Hanjiro hopes to find a faculty position where he can help junior scientists and engineers connect their research and passions with opportunities for doing social and environmental good.

Degree and Graduation Date (or Anticipated Date)

Hanjiro expects to receive a PhD in civil and environmental engineering from the University of California, Davis in 2018.

Preferred Career after Graduation

Hanjiro plans to pursue a career in academia.

Broad Research Interest Area

Transport policy, infrastructure systems, freight.

Specific Research Area

Life cycle assessment.

Primary Mode(s)

Road, public transit.

Top Accomplishment in 2017

Published master's degree research work—Ambrose and Kendall (2016) ISSN1361-9209.

Appointed to Standing Committee of the Transportation Research Board (ADD40).

Thesis Title and Summary

"Life Cycle Assessment for Heavy-Duty Vehicle Transitions."

Heavy-duty vehicles (HDVs) service a variety of diverse and critical vocations, but have significant impacts on transportation infrastructure and urban centers. New vehicle and fuel technologies are being proposed as potential mitigations, but the costs and benefits of deploying these technologies is often unknown. This research identifies abatement options in the HDV sector and compares the life cycle costs and emissions of HDV pathways for mass transit and sustainable freight.

Shweta Dixit

George Mason University

Transportation Informatics University
Transportation Center
at State University of New York
at Buffalo

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Bio

Shweta Dixit received her bachelor's degree in civil engineering from Nagpur University, India in 2005. She worked for Aarvee Consultants, an engineering firm in India, as an environmental engineer before moving to the United States in 2007. Shweta received her master of science in civil, environmental, and infrastructure engineering in 2010 from George Mason University (GMU). She started her PhD program in 2010 as a recipient of the prestigious Presidential Scholar Award at GMU. While continuing with her PhD program, she worked for Arlington County, VA, AECOM, and Loudoun County, VA for two years until 2016, in various capacities. In 2016, she returned to George Mason University as a full-time doctoral student and received a competitive award from the GMU provost for completing her dissertation.

Degree and Graduation Date (or Anticipated Date)

Shweta received a PhD from George Mason University in August 2017.

Preferred Career after Graduation

Shweta plans to work in academia or as a consultant in the public or private sector.

Broad Research Interest Area

Transportation planning, transport policy.

Specific Research Area

Travel demand modeling, transportation policy, air quality modeling.

Primary Mode(s)

Road

Top Accomplishment in 2017

Shweta's work resulted in a journal paper co-written with M.M. Venigalla: "A Methodology to Derive Land Use Specific Auto-Trip Emission Footprints from Household Travel Survey Data. Land Use Policy (in review)." Another paper is under preparation.

Thesis Title and Summary

"Modeling Emission Footprints of Sustainable Land Use Policies at the Local Jurisdictional Level."

This dissertation research proposes a disaggregate methodology that is sensitive enough to sustainable land use policies and allows planners to quantify emission impacts of the policies at the sub-regional level. At the center of the methodology is a sub-regional travel demand model with finer TAZ resolution than what is represented in the regional model for the same sub-region. The methodology is demonstrated by the results, which show that significant emission reductions can be achieved by sustainable land use policy implementation at the sub-regional level.