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Graduate Research Award Program

STUDENT BIOGRAPHIES

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Jacob Avery

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Jacob Avery is a MS student at the Massachusetts Institute of Technology in the Department of Aeronautics and Astronautics. Prior to that, he received a BS in Mechanical Engineering with highest honors at the University of Illinois at Urbana-Champaign. Jacob currently works in the MIT International Center for Air Transportation Laboratory under Hamsa Balakrishnan.

Jacob's research interests at MIT focus on using machine learning algorithms, network theory, and discrete choice approaches to model airport operations and to characterize delay in the National Airspace System.

Currently, Jacob is applying discrete choice modeling approaches to develop objective functions that describe the runway configuration selection process for air traffic control personnel. These objective functions are then used to predict the runway configuration over a specified planning horizon, which is a key component for airport capacity predictions.



Benjamin Bacon
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Benjamin Bacon, M.S., E.I.T., is currently enrolled in Auburn University's Department of Civil Engineering. For the past two years, his primary research has been in support of developing a long range transportation model for the Federal Highway Administration. During this time he has also conducted a multitude of other research endeavors including studies into paratransit behavior, the role of geographic scale on travel decisions, and the impact of bike boxes on intersection level of service. Achievements and awards include the Box Fellowship, the Eisenhower Fellowship, and he is currently the Vice-President of the Auburn University Chapter of the Institute of Transportation Engineers.

Prior to beginning his studies at Auburn, he served in the 82nd Airborne Division and deployed to Afghanistan, Iraq, and mobilized in support of Hurricane Katrina recovery operations. He is currently serving as Company Commander for a horizontal engineer unit located at Fort Benning, Georgia.





Sarah-Blythe Ballard

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Sarah-Blythe Ballard is a Lieutenant Commander in the U.S. Public Health Service, currently serving as an Epidemic Intelligence Service Officer at the Centers for Disease Control and Prevention in Atlanta, Georgia. Since 2011, she has been conducting aviation safety research with the Hopkins Center for Injury Research and Policy, where she has published multiple first-authored articles about the public health risks associated with air tour crashes of helicopters, airplanes, and hot-air balloons. While a graduate student at the Johns Hopkins University, she won an award as part of the ACRP Graduate Award Program on Public Sector Aviation Issues for academic year 2013-2014, preparing research on “Epidemiology and Public Health Risks Associated With Air Show-Related Morbidity and Mortality.”

Previously, she served as the Command Flight Surgeon for Marine Heavy Helicopter Squadron 362 in Camp Bastion, Afghanistan, and the Senior Medical Officer in charge of the Third Marine Aircraft Wing (Forward) Flight Line Aid Station. In addition, she has led humanitarian assistance and disaster relief missions in the Pacific Region as an American Red Cross physician, acted as military liaison to the Dhi Qar Provincial Reconstruction Team in Iraq, and completed civic action projects in Venezuela, Peru, and Djibouti. Sarah-Blythe holds an M.D. from Emory University and an M.P.H. and Ph.D. from Johns Hopkins. She completed her Preventive Medicine Residency at Johns Hopkins and is board certified in Aerospace and General Preventive Medicine. Her aviation-related awards include two Individual Strike/Flight Air Medals, the Richard E. Luehrs Navy-Marine Corps Flight Surgeon of the Year Award, the Chief of Naval Operations Safety Award, and the John Stapp Prize in Transportation Policy.





Sakib Bin Salam

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Sakib Bin Salam is a transportation economist and consultant with Parsons Brinckerhoff. He specializes in the analysis of public transportation data, financial analysis, and economic research. He is interested in public policy issues in transportation- both academic and those affecting stakeholders across the US. Prior to joining his current position, he was a master's student in applied economics at Oregon State University. The ACRP paper was part of his master's thesis which is a study of Southwest Airline's post-entry pricing strategies faced with different market-level competition from rival airlines. He also had the opportunity to work at the Eno Center for Transportation in Washington, DC where he published an economic study on overcoming the policy obstacles facing the multi-billion dollar federal aviation modernization program called NextGen.

Sakib is originally from Dhaka, Bangladesh. He came to the US in 2005 for higher education, and got his B.A in economics from Reed College in Portland, OR. In his spare time, he enjoys playing guitar, watching movies, and following soccer. His favorite team is Manchester United.



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Dan Boedigheimer is the CEO and a founding partner in Advanced Aircrew Academy. Dan has held positions as an FAA Aircraft Program Designee, Pilot Proficiency Examiner, Check Airman, Instructor Pilot, Flight Standards Manager, and Training Manager for Part 135 Air Carriers. He is also a Human Factors Lead Facilitator and consultant for Convergent Performance.

Dr. Boedigheimer holds a bachelor's degree in aviation management from Minnesota State University, a master's degree in aviation safety from Embry Riddle Aeronautical University, and a Ph.D. in aerospace science from North Central University. He is a member of the Delta Mu Delta Academic Honor Society and holds an Airline Transport Pilot certificate with over 5,000 hours of flight experience in business jets. He also holds a Gold Seal Certified Flight Instructor certificate.

Dan is the safety leadership working group lead in the National Business Aviation Association (NBAA) Safety Committee and an active participant FAA/Industry Transport Airplane Performance Planning (TAPP) Working Group. Dan is currently researching pilots use of supplemental oxygen for the High Altitude Supplemental Oxygen working group.

In addition to speaking at Bombardier's Safety Standdown, Aviation Human Factors and SMS Conference, NBAA regional forums, Global Aerospace SM4 Aviation Safety Seminars, and Aviation Week's Fatigue Management Forum; Dr. Boedigheimer has authored two books, UC Systems and UE Systems, describing the complete systems components of the Beech 1900D Airliner.





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Yi Cao is pursuing the PhD degree at the School of Aeronautics and Astronautics, Purdue University. He received a bachelor degree in instrumentation science and engineering in 2006, and a master's degree in navigation, guidance and control in 2009 from Shanghai Jiao Tong University, China. His research mainly focuses on modeling, optimization, simulation, with an emphasis in air traffic flow management.



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Yashovardhan Chati is a doctoral student at the Massachusetts Institute of Technology in the Department of Aeronautics and Astronautics. He works in the MIT International Center for Air Transportation with Prof. Hamsa Balakrishnan. Prior to coming to MIT, he received his Master of Technology and Bachelor of Technology degrees in Aerospace Engineering from the Indian Institute of Technology (IIT) Bombay in 2012.

Yashovardhan's doctoral research at MIT focuses on using machine learning algorithms to model aircraft performance. The high-level aim of his research is to develop statistical models which can estimate aircraft fuel flow, fuel burn, and takeoff weight given its flight trajectory information. These models can help evaluate the fuel burn and emissions impact of different routes and operational procedures.

Yashovardhan has received the IIT Bombay Institute Gold Medal in 2012 for being the most outstanding graduating student, a Graduate Research Award in Public Sector Aviation Issues from the Transportation Research Board's Airport Cooperative Research Program in 2016, and a best paper award in the USA/Europe Air Traffic Management Research and Development Seminar 2017.



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Kanthasamy Chelliah is a postdoctoral scientist at Argonne National Laboratory at Energy Systems Division. His research areas include computational acoustics, microphone array processing, and building energy conservation. He received his PhD (Aug 2016) from the dept. of mechanical, materials and aerospace engineering, Illinois Institute of Technology (IIT), Chicago, IL. He was also working as a research assistant at the fluid dynamics research center of IIT dealing with the development and implementation of acoustic source localization techniques such as acoustic holography and beamforming from 2011-2016. His dissertation title is 'Leakage detection techniques using nearfield acoustic holography'.

Prior to starting his PhD, he obtained his master degree in mechanical engineering from Indian Institute of Technology Madras, Chennai, India. His master's thesis dealt with the effect of vibrations on the characteristics of reacting flows. He graduated with his undergraduate degree in aerospace engineering from Anna University, India in 2008. He is currently a member of The Acoustical Society of America. He has published six papers in peer reviewed journals and 15 papers in the proceedings of various international conferences.



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Heng Chen is an Assistant Professor of Supply Chain Management & Analytics in the College of Business Administration at the University of Nebraska-Lincoln. He received his Ph.D. in Management Science from University of Massachusetts Amherst in 2016, his M.S. degree in Mathematics from University of Massachusetts Amherst in 2011, and his B.S. degree in Applied Mathematics from Huazhong University of Science and Technology, where he graduated with distinction in 2008.

Heng's primary research interest is in air transportation, which involves analyses of large-scale air traffic data and their utilization through stochastic modeling and optimization. His secondary research interest involves newly arising supply chain management problems resulting from the use of unmanned aircraft systems (UAS) technology.

His honors and awards include the Graduate Research Award from the Federal Aviation Administration, the INFORMS Transportation Science & Logistics Society Outstanding Paper in Air Transportation, the INFORMS Aviation Applications Section Best Student Presentation Award and the Outstanding Doctoral Student Researcher Award from the Isenberg School of Management.



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Sophie Clachar is a doctoral candidate in Scientific Computing at the University of North Dakota (UND) under the tutelage of Dr. Travis Desell and Prof. James Higgins. Originally from St. Catherine, Jamaica, Sophie completed her M.S. in Computer Science from UND and her B.S. in Computing and Information Technology from the University of Technology, Jamaica. Sophie's current research interest focuses on the application of novelty detection to proactively identify anomalies in flight data.

In her graduate studies she participated in two research endeavors that focused on aviation safety: 1) Large-scale data analysis and software development for the National General Aviation Flight Information Database, and 2) Verification and validation of an air truth system that governed the operation of Unmanned Aerial Vehicles in the US National Airspace.

Sophie is a recipient of the ACRP Graduate Research Award which fostered the development of analytical techniques, using artificial neural networks, to identify unstable approaches at the Grand Forks International Airport.



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Boris Claros

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Boris Claros is a Ph.D. Candidate in Civil Engineering at the University of Missouri. Boris completed his MSCE degree as a Fulbright Scholar also at the University of Missouri - Columbia.

In his master thesis, he worked on evaluating operations of signalized roundabouts. As part of his doctoral dissertation, he has studied safety of the Diverging Diamond Interchange (DDI), J-turn intersection, automated enforcement (red-light camera). Boris presented the first comprehensive safety evaluation of the DDI in the United States showing the safety benefits of this new innovative interchange. To mention some, the American Association of State Highway and Transportation Officials (AASHTO) awarded this research the "Sweet Sixteen" award for high value research nationwide. Also, the Operational Effects of Geometrics Committee of the Transportation Research Board of the National Academies awarded this research "Best Paper Award" of 2015. The research on the J-turn intersection focused on safety evaluation and design guidance of U-turn spacing with observed crashes and simulation. The study of red light cameras focused on safety evaluation, crash cost benefit, and legal issues research in Missouri. Boris' dissertation also contributes with guidance on crash reports review and assignment. In Missouri, he found that crash data has several issues, especially at interchange facilities which require crash data correction. He reviewed over 15,000 crash reports and directed another 11,000 crash report reviews in different research projects.

Although his dissertation offers significant contributions in roadway transportation, Boris has pursued to apply this well established methodologies in a different mode of transportation such as airfield safety. There is not a specific prediction methodology for runway incursions which are a major concern for runway safety analysis. Through the Airport Cooperative Research Program (ACRP), he prepared a research paper to develop runway safety models to predict runway incursions.



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Regina Clewlow

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Dr. Regina R. Clewlow is the Director of Transportation Research and Policy for RideScout, Enterprise Solutions, and is also a Research Analyst with the UC Davis Institute of Transportation Studies. In addition, she is a Research Scholar at the Stanford University Precourt Energy Efficiency Center, working with the Future Mobility initiative. Prior to these current appointments, Dr. Clewlow was a Postdoctoral Scholar at UC Berkeley in the Institute of Urban and Regional Development, where her research focused on developing advanced behavioral models of transportation and household choices, in order to improve large-scale simulation models of land use, travel demand, and the environment. She received her Ph.D. from the Engineering Systems Division (ESD) at the Massachusetts Institute of Technology (MIT) in September 2012. Her doctoral dissertation examined demand for high-speed rail and air transportation systems, the environmental impacts of these systems, and their performance under climate policies. Dr. Clewlow's broader research interests include building an improved understanding of the factors that shape transportation and energy demand, through interviews, surveys, and econometric techniques.

Prior to starting graduate school at MIT, Regina co-founded the nonprofit organization Engineers for a Sustainable World (ESW), where she served as Executive Director from 2002 to 2008. She received her B.S. in Computer Science and M.E. in Civil & Environmental Engineering from Cornell University. Regina is the recipient of an MIT Energy Fellowship (2008), MIT Martin Family Sustainability Fellowship (2010), Dwight D. Eisenhower Graduate Transportation Fellowship (2010) and EPA STAR Graduate Fellowship (2011).



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Tara Conkling is a PhD candidate in the Department of Wildlife, Fisheries, and Aquaculture and a member of the Agricultural Ecology Laboratory at Mississippi State University. Her dissertation examines aviation risk, habitat use and productivity of grassland bird species in the Black Belt Prairie region of eastern Mississippi. She received her B. S. degree with a dual major in Wildlife Biology and Biology and a secondary major in Natural Resources and Environmental Science from Kansas State University and her M.S. degree in Wildlife and Fisheries Sciences from Texas A&M University. Her research interests include avian ecology, predator–prey dynamics, and human–wildlife conflicts.



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Elizabeth Connelly graduated from Furman University in 2011 with bachelor's degrees in Mathematics and Economics. She received her M.S. (2013) from the department of Systems and Information Engineering at the University of Virginia. She is currently a research assistant in the Center for Risk Management of Engineering Systems at UVA and is expecting to graduate with her Ph.D. in Systems Engineering in December 2015.

Her dissertation topic involves integrating risk analysis methods with environmental life cycle assessment (LCA) to produce a research and development roadmap for aviation biofuels. As a 2014-2015 recipient of the Airport Cooperative Research Program Graduate Research Award Program on Public-Sector Aviation Issues, her current research includes performing a systems analysis of the potential for aviation biofuel production in the Commonwealth of Virginia. More broadly, her research interests are on risk analysis to support economic and environmental sustainability of energy, transportation, and other complex systems.

She has experience working on projects relating to risk assessment, decision analysis, and asset management for the Virginia Department of Transportation, U.S. Army Corp of Engineers, the Port of Virginia, and Virginia Department of Aviation. She is a member of the Society for Risk Analysis (SRA), the Institute for Operations Research and Management Sciences (INFORMS), and the National Society of Professional Engineers. She was selected as a 2014-2015 Scholar of the Metropolitan Washington Chapter of Achievement for College Scientists (MWC/ARCS).





Gabriela DeFrancisci

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Gabriela DeFrancisci received her B.S. (2008) from California Polytechnic State University, San Luis Obispo's Department of Civil Engineering. She received her M.S. (2010) and is currently completing her Ph.D. at University of California, San Diego in structural engineering. In 2008, she received the UCSD Structural Engineering Department Fellowship. She was a Transportation Research Board fellowship recipient on public sector aviation issues in 2009-2010 and a California Space Grant Fellowship Recipient in 2010. Gabriela conducts her multi-faceted research for the FAA Joint Center of Excellence for Advanced Materials and Structures which is sponsored by the FAA Office of Aviation Research at the FAA Wm. J. Hughes Technical Center.

Her project involves interactions with various aspects of the aviation industry including the airframers, the airline operators and material suppliers, as well as FAA and EASA. Gabriela's main research area is wide area, blunt impact on composite structures, similar to accidental contact between a ground service vehicle and a commercial aircraft. Her dissertation is entitled "High Energy, Wide Area, Blunt Impact on Composite Aircraft Structures" which has very strong implications related to safety and detection of damage in the new generation of composite airframes.



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Timothy is a doctoral student in Biology at Indiana State University. Prior to starting that in 2014, he received a MS in Biology at the University of Southern Maine in Portland, Maine, and a BS in Biology at Worcester State University in Massachusetts.

Timothy's research focuses on the foraging ecology of endangered bats—how they select and use foraging habitat, how they interact with their prey, and how they respond to changes on the landscape—in human-modified habitats in central Indiana. His current project funded by the ACRP Graduate Research Award investigates how a colony of Indiana bats (*Myotis sodalis*) responded to development of new runways, highway interchanges, commercial development, and creation of mitigation habitat near the Indianapolis International Airport over a 20-year period, 1997–2016. He has studied bat ecology since 2007 and has been involved in endangered bat presence/absence surveys for domestic gas and oil development in the eastern US since 2009.



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Derek Doran is an Assistant Professor in the Department of Computer Science & Engineering at Wright State University in Dayton, OH. He directs the Web and Complex Systems Lab in the department, which carries out applied and theoretical work in large-scale network and relational data analysis, social informatics, Web mining, and distributed systems performance modeling. He is an author on over 40 publications, four of which have been recognized with best paper awards and nominations, and is an inventor on three patents (one pending). His ACRP Graduate Research Award supported the development of analytic, realistic, and easy-to-use performance models of airport security checkpoints.

Dr. Doran received his Ph.D. from the University of Connecticut in 2014. is a National Science Foundation East-Asia and Pacific Summer Institutes Fellow, and prior to joining Wright State, was a twice Summer Alumni of Bell Labs, a visiting researcher at the Dependable Distributed Systems and Networks Lab at National Taiwan University, and an Interim Researcher in the (Big) Data Analytics team at ABB U.S. Corporate Research. More information is available at: <http://knoesis.wright.edu/doran>.



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Jeffrey Eloff

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Jeff Eloff is currently employed with Sonic Automotive providing industry analysis, business forecasts and assistance in the development of new and used automotive vehicle pricing and inventory optimization models.

He holds a master's degree in Economics with a specialization in Applied Econometrics and received his Ph.D. in the Spatially Integrated Social Science program from the University of Toledo in December 2014. His dissertation was concerned with the interplay between publicly-funded transportation investments and the spatial economy. While a graduate student at the University of Toledo, he won an award as part of the ACRP Graduate Award Program on Public Sector Aviation Issues for academic year 2013-2014, preparing research on "Airport Infrastructure Investments in Light of Network Effects."



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Alex Estes is a Ph.D. candidate in Applied Mathematics & Statistics and Scientific Computing at the University of Maryland College-Park. His advisor is Dr. Michael Ball. Alex's research has involved the use of techniques from machine learning, stochastic optimization and combinatorial optimization in order to help air navigation service providers plan traffic management initiatives. Under the ACRP Graduate Research Award Program, he developed data-driven techniques for choosing the parameters of ground delay programs.



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Dan Favarulo was a member of the 2008-2009 ACRP's Graduate Research Award Program where he completed research on the non-fiscal barriers to airport development. Dan currently works for the Maryland Department of Transportation's Office of Planning & Capital Programming as the Manager of Capital Program Administration. He is responsible for property management of Baltimore/Washington International Thurgood Marshall Airport (BWI) terminal space as well as coordination with air carriers on various lease agreement and airport operation issues.

Prior to his work with the MAA Dan worked for the Federal Aviation Administration's (FAA) Office of Airports as a Program Analyst in the Airport Improvement Program (AIP) Branch. Dan specifically formulated the AIP budget, calculated and briefed management on budget forecasts, developed and coordinated program eligibility and financial guidance, and reviewed and approved capital project grants. Dan received his M.A. in Transportation Policy, Operations and Logistics from George Mason University and his B.A. in Politics from the Catholic University of America. While a graduate student at the George Mason University, he won an award as part of the ACRP Graduate Award Program on Public Sector Aviation Issues for academic year 2008-2009, preparing research on, "Understanding Nonfiscal Barriers to Airport Development and Exploring Federal Policy Solutions."





Douglas Fearing

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Douglas Fearing is an Assistant Professor in operations management at The University Texas at Austin McCombs School of Business, teaching in the Executive MBA program in Fall 2013. Prior to joining McCombs, he was on the faculty of Harvard Business School where he taught technology and operations management to MBAs, stochastic modeling to doctoral students, and led an MBA field immersion to São Paulo, Brazil.

His research focuses on developing and applying analytical techniques for data-driven decision-making in the airline industry, sports management, and logistics. He is particularly interested in mitigating airport and airspace congestion by increasing the coordination between airlines and governmental managing agencies. Professor Fearing's paper on coordinating air traffic-flow management programs was awarded the Anna Valicek Medal by the airline industry group AGIFORS and his dissertation on air traffic flow management received the INFORMS Aviation Application Section Dissertation Prize. He also applies performance evaluation techniques to sports management, and his coauthored work in golf putting performance has been highlighted in *The Wall Street Journal* and *Slate*. In 2013, he and a coauthor won the Alpha Award for Best Research Paper at the MIT Sloan Sports Analytics Conference for research on flexibility in baseball roster construction.

Professor Fearing received his Ph.D. in operations research from the Massachusetts Institute of Technology, where he won teaching awards from the MIT Sloan School of Management and the MIT Graduate Student Council. After earning his bachelor's degree in computer science with honors at Carnegie Mellon University, he spent five years at Trilogy, a software company in Austin, Texas, working on engagements with Ford, British Airways, and Goodyear. Based on his sports management research, he has consulted for Titleist and currently serves as a Senior Advisor to Baseball Research and Development for the Tampa Bay Rays. Professor Fearing and his wife have two young children.



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Mr. Feinberg is a Ph.D. candidate at Washington University in St. Louis in the Department of Energy, Environmental and Chemical Engineering. His expertise includes air quality field measurements, emissions estimation and air quality dispersion modeling, and receptor based modeling. His research primarily focuses on the refinement of methodologies to estimate near-field impacts from emission sources. This work includes transportation emission sources with activities that are difficult to spatially and temporally allocate such as rail yard and airport operations.



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Mr. Makarand Gawade is currently a Data Scientist in HDR, Inc. and a PhD Candidate in Civil and Environmental Engineering at USF. His expertise includes freight data analysis, modeling, pedestrian/bicyclist safety and network science. He has worked on multiple projects with Florida Department of Transportation on freight issues and data management. His expected date of graduation is May 2019. His dissertation topic is related to quantifying performance of freight networks. In his spare time, Makarand enjoys Cross Fit, dancing, reading books and following soccer. His favorite team is Chelsea.



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Dr. Benjamin "B.J." Goodheart has worked in aviation since the mid-1990s starting in aircraft ground service. He is an active pilot and holds a multi-engine Airline Transport Pilot certificate as well as single/multi/instrument Gold Seal Flight Instructor and advanced ground instructor ratings. Previously, B.J. managed flight training for an aviation university and worked in aviation safety with the Center for Aerospace Safety Education and with the American Airlines Flight Safety department. He currently serves as the Managing Director of Versant, a global aviation safety and risk management consultancy.

B.J. holds an undergraduate degree in aeronautical science, and a master's degree in safety science, and completed his Ph.D. at Embry-Riddle Aeronautical University. He also holds a certificate in Aviation Safety Program Management from the Center for Aerospace Safety Education, including certificates in Advanced Accident Investigation for fixed- and rotor-wing aircraft, and he has participated in several aviation accident investigations from light to transport-category aircraft. B.J.'s professional and research interests include safety management system review and development, organizational culture and change management, and probabilistic modeling for safety risk management. B.J. is passionate about translational research that provides direct results and support for operators. He currently lives in Evergreen, Colorado, with his wife and two children where they enjoy exploring the Rocky Mountains year round.





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Sreeta Gorripaty is pursuing her PhD at University of California, Berkeley in Transportation Engineering. Sreeta did her MS in Transportation Engineering in UC Berkeley and Bachelors in Civil Engineering in Indian Institute of Technology Bombay.

Sreeta focuses on using Machine Learning to develop algorithms for aviation applications. Sreeta has been working on developing algorithms to find similar days at an airport to develop decision-support tools and uses data mining techniques to improve the airport planning process. She has also worked with Apple Maps to develop an evaluation framework to improve their routing algorithms using user data.

Her accolades include Graduate Research Award funded by National Academy of Sciences & Federal Aviation Administration and WTS Beverley Swaim Staley Leadership Legacy Scholarship.



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Maria Guercio is currently a Project Manager at The Transtec Group which provides pavement engineering services nationally and internationally. She works on Design/Build and Public-Private Partnership (P3) transportation projects. She completed her Ph.D. dissertation in Civil Engineering at Villanova University near Philadelphia, Pennsylvania. Her research was conducted under the supervision of her advisors, Dr. Leslie McCarthy, Dr. Andrea Welker, and Dr. Eric Musselman at Villanova, and her co-advisor, Dr. Yusuf Mehta, from Rowan University in Glassboro, New Jersey. Her research emphasis was on energy-conscious and alternative asphalt mixtures for airfield pavements on aprons and taxiways. She completed her Bachelor of Science in Architectural Engineering (structural concentration) at Drexel University in 2011 and her Master of Science in Civil Engineering (transportation focus) at Villanova University in 2012.

While a graduate student at Villanova University, she won an award as part of the ACRP Graduate Award Program on Public Sector Aviation Issues for academic year 2013-2014, preparing research on, "The Performance of Energy Conscious Materials in Flexible Airfield Pavements." In addition, she was involved in two key NCHRP projects: NCHRP Project 9-22B *Comparing HMA Dynamic Modulus Measured by Axial Compression and IDT Methods* and NCHRP Project 20-07 Task 317 *Update of "Mechanistic-Empirical Pavement Design Guide Manual of Practice"*. She has also assisted in the preparation of the National Highway Institute Course # 131023 *"Highway Materials Engineering, Module E – Pavement ME Design"*.



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Osman E. Gungor received the B.S. degree in civil engineering from Middle East Technical University, Ankara, Turkey, in 2012 and the M.S. degree in civil engineering from University of Illinois at Urbana-Champaign, USA, in 2015. He is currently pursuing the Ph.D. degree in civil engineering at the University of Illinois at Urbana-Champaign.

Since 2013, he has been a research assistant with Illinois Center for Transportation, USA under the supervision of Prof. Imad Al-Qadi. His research interest includes the evaluation of pavement surface using computer vision techniques, numerical modelling of pavement materials and development of data-driven models to quantify the effects of environmental and traffic loading on transportation infrastructures. He has contributed to several projects in his time at ICT, including "Validation and Revision of Fees Charged for Oversize/Overweight Vehicle Permits", sponsored by Illinois Department of Transportation (IDOT), "Instrumentation and Analysis of Airfield Pavement Responses," sponsored by the Federal Aviation Administration; "The Impact of Wide-Base Tires on Pavement — A National Study," sponsored by the Federal Highway Administration; and "Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes using Reclaimed Asphalt Pavement (RAP) and Recycled Asphalt Shingles (RAS)," sponsored by IDOT. Mr. Gungor's awards and honors include the ACRP award (Airport Cooperative Research Program), European Union Erasmus Scholarship and Sabanci Holding Fellowship and the best paper of the year by Turkish Road Association.



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Alex Hainen is a Ph.D. candidate at Purdue University in civil engineering focusing on transportation engineering. He is currently funded by a fellowship from the United States Department of Transportation under the Dwight David Eisenhower Transportation Fellowship.

He completed his bachelor of science in civil engineering at Michigan Technological University in 2009 and his master of science in civil engineering at Purdue University in 2011. His research interests include traffic operations, traffic signals, roundabouts, travel time, and airport operations.



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Jaime A. Hernandez finished his PhD from the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign in December 2015. He holds a bachelor's degree in civil engineering from the National University of Colombia at Medellin and a master's degree from Ohio University. His research interests include modeling of flexible pavement structures, tire-pavement interaction, and pavement instrumentation. As graduate student at University of Illinois, he assisted with several projects including the study of the effect of wide-base tires on pavements, characterization of tire-pavement contact stresses using finite element modeling and experimental measurements, and the effect of various tire parameters on pavement damage.

Jaime has received various awards including the General Scholarship from the Society of Hispanic Professional Engineers, First Place Winner in the Younger Member Paper Contest from the ASCE Transportation and Development Institute – 2013 Airfield and Highway Pavement Conference, and Young Researcher from COLCIENCIAS (Colombian equivalent to National Science Foundation). Currently, Jaime is a postdoctoral research associate at University of Illinois, and he is collaborating in an instrumentation project conducted by the Federal Aviation Administration at John F. Kennedy international airport aim to study load and environment induced responses in concrete pavements. In addition, he is developing a micromechanical model of the semi-circular beam.





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Susan Hotle is an Assistant Professor in the Department of Civil and Environmental Engineering at Virginia Tech and is a researcher in the FAA's NEXTOR II consortium with projects, analyzing surface performance and operational metrics. She received her PhD in Civil Engineering from the Georgia Institute of Technology in 2015, working under the advisement of Dr. Laurie Garrow. Susan's doctoral research focused on examining and modeling airline customer search and purchase behavior. Her B.S. (2010) and M.S. (2011) degrees are also in Civil Engineering from the Georgia Institute of Technology.

While a graduate student at the Georgia Tech, she won an award as part of the ACRP Graduate Research Award Program on Public-Sector Aviation Issues for academic year 2012-2013, preparing research on "The Role of Competitor Pricing on Multi-Airport Search." Prior to joining Virginia Tech's faculty in 2016, Susan worked as an Operations Research Analyst for GRA, Incorporated, supporting the Federal Aviation Administrations' Office of Performance Analysis. During her time in Washington D.C., Susan analyzed taxi-out delay as well as collaborated with Eurocontrol and the Civil Aviation Authority of Singapore (CAAS) to benchmark U.S. operational metrics internationally.



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Evan Humphries is a Research Associate in the Ingram School of Engineering at Texas State University, where she assists with developing and submitting proposals for funding, networks multidisciplinary teams for major research projects, establishes relationships with industry partners, and manages student workers on research projects. She also teaches Industrial Safety (TECH 4380) at Texas State University. She graduated with her Master of Science in Technology – Industrial Technology, in the Department of Engineering Technology at Texas State University in May 2015. She worked in industry for a global airfield pavement services contractor for two and a half years as the International Coordinator, where she established a technical understanding of multiple pavement maintenance activities. During her time there, she was involved in work on 15 airports in 8 countries.

Her work included evaluation of pavement surface characteristics, and she developed an interest in long-term pavement maintenance planning for budgetary optimization, especially at international and General Aviation airports. She began working at Texas State University on transportation research in 2012. Since then, she has written proposals for and been awarded grants to perform pavement research from the Federal Aviation Administration, the Texas Department of Transportation, and the Transportation Research Board under the Graduate Research Award for Public Sector Aviation Issues (ACRP 11-04). Her TRB research is published in the Transportation Research Record No. 2471. She is also published in the International Journal of Pavement Research and Technology (Vol. 7, No. 3, May 2014). Recently, she co-authored a book chapter in "Smart Cities: Applications, Technologies, Standards, and Driving Factors" (Springer, 2017), and has been working on innovative new materials research.

She is currently assisting with the development of a proposed new program in civil engineering at Texas State University. The academic program is being developed around the concept of technology-enhanced infrastructure design and management, with complimentary research activities in a number of civil fields.





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Peter Hylton is a PhD Student at Georgia Tech's School of City and Regional Planning, studying under Dr. Catherine L. Ross. He researches freight, logistics, and airport planning. His dissertation examines electronic fulfillment's impact on airports, economic development, and surface transportation infrastructure. Previous work has examined logistics cluster competitiveness and near-airport distribution centers.

Peter graduated with a Bachelor of Science degree from Georgia Tech's Sam Nunn School of International Affairs (French language and European policy focus), and also holds a Master's degree from Georgia Tech's School of City and Regional Planning. Before beginning graduate school, he worked as a logistician for the U.S. Army.



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Alexandre Jacquillat is an Assistant Professor of Operations Research and Public Policy at Carnegie Mellon University's Heinz College, with cross-appointments in the Department of Civil and Environmental Engineering and at the Tepper School of Business. His research develops and applies stochastic models and optimization methodologies to promote more efficient, reliable, and sustainable infrastructure systems. His primary focus is on air traffic management systems, with the goal of developing data-driven decision-making approaches to enhance airport operations, flight scheduling and capacity planning at busy airports.

He is also interested in the emerging field of ride-sharing systems, and their implications for urban mobility, technology deployment, congestion mitigation and emissions reductions. Alexandre is the recipient of several research and leadership awards, including the George B. Dantzig Dissertation Award and the Transportation Science and Logistics Dissertation Prize from INFORMS, the Milton Pikarsky Memorial Award for Best PhD Dissertation in transportation science and technology from the Council of University Transportation Centers (CUTC), the Dissertation Award competition from the Industry Studies Association (ISA), the Anna Valicek Award from AGIFORS, and the L.E. Rivot Medal from the French Academy of Science.



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Luisa Janer is a graduate student at the University of Arkansas, pursuing a master of science in industrial engineering. She earned a bachelor of science in industrial engineering from the University of Arkansas, as well. Luisa works as a teaching assistant of Simulation for the Industrial Engineering department.

Luisa started her research career as an undergraduate honors student. She has worked under the guidance of simulation expert Dr. Manuel Rossetti, on evaluating through discrete simulation modeling possible alternatives to ease the continuous passenger flow at security checkpoints. She has also worked on simulation modeling of inventory systems.

She assisted in the development of a spreadsheet simulation model to evaluate the effectiveness of a vehicle routing tool designed to transform the routing and inventory methods at Helmerich and Payne. Luisa's research interest include simulation modeling, network optimization on transportation logistics, and development of material handling equipment for the aviation industry. Luisa is hopeful to find a position in industry where she can pursue a career in any of these areas.





Hernando Jimenez

Georgia Institute of Technology

Research Faculty

Atlanta, GA

Dr. Hernando Jimenez passed away on Sunday, October 23, 2016, at the age of 36. Hernando was born on February 10th, 1980, in Bogota, Colombia. Even as a young child, he had dreams of flight. He harnessed that fascination when he came to the USA in 2001 to complete his studies in Aerospace Engineering at the Georgia Institute of Technology, receiving his Bachelor of Science (2003), Master of Science (2006), and Doctorate of Philosophy (2009). After earning the terminal degree for his field of study, he was appointed to be a member of the research faculty at the Aerospace Systems Design Laboratory (ASDL).

As a graduate student and member of the research faculty at the Georgia Institute of Technology, Dr. Jimenez participated in numerous research efforts sponsored by the National Aeronautics and Space Administration and the Federal Aviation Administration in areas of aircraft design and analysis, aircraft technology modeling and selection, air transportation measures for environmental impact mitigation, and integration of unmanned aircraft systems into the national airspace. Dr. Jimenez was a recipient of a 2008-2009 Airport Cooperative Research Program Graduate Award, sponsored by the FAA and administered by the Transportation Research Board of the National Academies, for which he conducted research on characterization of operational and environmental performance of airports and terminal areas including NASA advanced vehicle concepts. He was also a graduate fellow of the 2007-2008 Sam Nunn Security Fellowship Program where he conducted research on critical infrastructure protection and airport security risk mitigation. He served as a member of the TRB Aviation Systems Planning Committee, vice-chair/chair-elect of the AIAA Aircraft Design Technical Committee, and co-chair of the AIAA Aerospace Systems Integration Working Group.

He is survived by his wife, Stephanie Dietrich and two children, Victoria Sophia and Daniel Ivan. He will be remembered for his passion, his love for family and friends, his stupendous eloquence, and his inimitable sense of humor. In addition to his wife and two children, Hernando is survived by his parents, Humberto Jimenez and Anna Susanna "Ansi" van Wageningen; his siblings, Daniel, Humberto Jr, Juan Manuel, and Sandra.

Information updated from <http://www.asturner.com/obituary/Hernando-Jimenez/Decatur-GA/1664804>.



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James Jones is a PhD student in the civil engineering department at the University of Maryland. He holds a B.S. in engineering from Swarthmore College, an M.S. in electrical engineering from the University of Maryland and an M.S. in systems engineering from The George Washington University. Prior to pursuing his PhD, James held positions at Northrop Grumman and the RAND Corporation. His duties there included performing trade studies, developing system designs, analyzing inventory turnover and developing analytical models of radar and electronic warfare sensor systems for the defense and intelligence communities. His research is focused on applying operations research techniques to solve problems of air traffic management. More broadly his current research interests include air transportation, systems engineering and transportation policy.





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Minkyung Kang is a PhD student in Civil and Environmental Engineering department at Carnegie Mellon University. In her PhD study, she explores the potential of application of sensor and data analytics to infrastructure systems such as building facilities. Her specific research interests involve applying machine learning techniques for effective energy management and HVAC control for buildings and interactions between grid and buildings for demand response programs. She is a recipient of Carnegie Institute of Technology Dean's fellowship as well as Transportation Research Board fellowship on public sector aviation issues in 2015-2016. Her research works have been sponsored by Pennsylvania Infrastructure Technology Alliance as well as Richard King Mellon Foundation. In her research project for Airport Cooperative Research Program involves identifying interactions between various factors, including outside weather and flight schedule information, and airport power consumption and developing a mathematical model for energy baseline for airport specific demand response applications.



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Donald Katz is currently working as a Manager in the Entity Planning and Analysis team with in Flight Profitability at Delta Air Lines in Atlanta, Georgia. Previously he worked for Long-term Planning and Competitive Analysis in Network Planning. He graduated with a Ph.D. in civil engineering from Georgia Tech in December 2012. He earned his master's degree in civil engineering from Georgia Tech in 2010 and his bachelor's degree in civil engineering from N.C. State in 2007. For his doctoral work, he explored the revenue impacts associated with depeaking hub airline schedules. Prior to attending Georgia Tech, Donald won a Fulbright to study bus crowding in Dhaka, Bangladesh, and collected and analyzed data to understand how bus design characteristics, stop locations, and crowding at doors influences safety and operational performance measures.

In 2010, he won a National Science Foundation Graduate Research Fellowship, and in 2011, he won an Airport Cooperative Research Project (ACRP) Graduate Research Award. Also in 2011, he attended the Eno Leadership Development Conference. Donald served as President of the Georgia Tech chapter of the Institute of Transportation Engineers and led the chapter to win the Student Chapter of the Year Award for the Southern District of ITE.



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Ilker Karaca is a Lecturer in Finance at Iowa State University Debbie and Jerry Ivy College of Business in Ames, IA. He teaches courses on a range of topics in finance and construction engineering, including advanced corporate finance, international finance, construction accounting and financial management, and project engineering and management. His research focuses on risk-based financial management, project financing, and resource level optimization for complex engineering projects. His research interests in aviation center on the quantification of airport business risks and on modeling capacity utilization and operating leverage trade-offs in airport investment decisions. His ACRP Graduate Research Award for his work titled "*Modeling Airport Business Risks, Enplanement Volatility, and Valuation of Flexibility Options in Airport Expansion Projects*" applied a real options valuation framework to airport expansion projects.

Dr. Karaca received his Ph.D. from Iowa State University in 2017. He holds an MBA degree from Texas Tech University, a B.S. in Civil Engineering from Bogazici University, Turkey.



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Jonathan Keeney joined the Mendoza College of Business at the University of Notre Dame in 2017 as a Postdoctoral Teaching and Research Associate.

His research focuses primarily on the psychology of ethical decision making, and how those decisions are shaped and complicated by features of the organizational context (e.g., third-party observers, workplace policies and climates, hierarchical relationships). His dissertation work explores when and how ethical decision making processes can promote worker safety.

Jonathan's academic background is in experimental moral psychology and philosophy, and his current research combines laboratory methods with organizational field research in a variety of industries, including transportation, healthcare, and offshore drilling.

He received a Ph.D. in Organizational Behavior from the University of North Carolina, and an MBA from Florida Atlantic University. He previously worked in the sports marketing and event management industries.



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Josephine Kressner, Ph.D.

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Josie is President and Founder of Transport Foundry, a company at the intersection of transportation planning and data analytics. She has an interest in solving critical pain points in urban planning through innovation, open data, and informed decision-making. With a National Science Foundation Small Business Innovative Research grant and a Transportation Research Board Innovations Deserving Exploratory Analysis contract, Transport Foundry develops methods to use marketing and mobile phone data from multiple sources to support the transportation planning process.

Josie graduated with a Ph.D. in Civil Engineering from Georgia Tech in 2014.



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Drake Krohn is a master's student at Purdue University in civil engineering, focusing on transportation engineering. Prior to that, he received a bachelor of science in civil engineering in 2015, also from Purdue University. Drake will graduate in May 2016 and plans to start his career in industry. His future career interests include airfield planning and design.



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Sameer Kulkarni graduated with a master's degree in operations research from George Mason University in the summer of 2011. He specialized in stochastic models. As a researcher, he worked as a graduate research assistant at the Center for Air Transportation Systems Research at George Mason University on an approximate dynamic programming approach to dynamic airspace configuration. He is a recipient of the Graduate Research Award for the academic year 2010 – 2011. His research paper was recently published in the TRR Journal, Vol.2266.

Sameer is currently working as a project manager with the Continental Automotive Group in India in the Chassis and Safety Division. Continental Automotive Group is a leading auto component manufacturer with a global presence. His area of focus is mainly manufacturing process optimization, manufacturing cost optimization, lean manufacturing and project management.





Fabrice Kunzi

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Born and raised in Switzerland, Fabrice Kunzi was first exposed to the study of physics and applied mathematics when he enrolled at the University of North Dakota where he also obtained a commercial pilot license with an instrument flight and multi-engine rating. He graduated *summa cum laude* with a bachelor of science degree in mechanical engineering with minors in mathematics and professional flight. During the last two years of undergraduate study, he joined a team developing the International Space Station Agricultural Camera—a NASA sponsored project that designed a multi-spectral camera, which is currently operating onboard the ISS.

As a graduate student at MIT, Fabrice focused on the technical implementation of ADS-B in the National Airspace System and how the various stakeholders will benefit from its introduction. The title of his master's thesis is "ADS-B Benefits to General Aviation and Barriers to Implementation." For his Ph.D. Thesis, he was part of the team that developed the "Traffic Situation Awareness with Alerting" Automatic Dependent Surveillance Broadcast Application (ADS-B) for the FAA. TSAA is the first conflict alerting application that allows for reliable alerting in the airport environment without unacceptably high rates of nuisance alerts. The algorithms developed for TSAA currently serve as the basis and a means of compliance with the international certification standard for TSAA published by standards-setting bodies RTCA and EUROCAE.

Fabrice now works at Aurora Flight Sciences as the airspace integration and operations research lead.



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Paulos Lakew completed his Ph.D. in transportation science at UC Irvine's Institute of Transportation Studies. He wrote his dissertation on the determinants of airport traffic and on the cost structures of major U.S. freight integrators (FedEx Express and UPS Airlines). His research work also dealt with the employment impacts and price effects of airline delays and competition at U.S. airports.

After completing his graduate studies, Paulos worked as a researcher and economist at the California Air Resources Board (ARB). At ARB, he analyzed the economic impacts of California's air quality and climate regulations related to transportation. Paulos is now transitioning to a career in aviation consulting at Unison Consulting. He will specialize in airport economics and finance.

Paulos earned his bachelor's degree in physics from Bard College. During his transition to graduate school, he worked as a Gateways intern at Los Angeles International Airport's (LAX) Noise Management and Airports Development Divisions.



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Ben Lee is currently a NOAA Climate and Global Change Postdoctoral Fellow working with Professor Joel Thornton at the University of Washington. His research goal is to improve our understanding of the role that atmospheric volatile organic compounds play in affecting air quality and climate. Specifically, his project with the Thornton group aims to quantify the contribution that these VOCs have on the formation of secondary organic aerosols which are potentially significant climate altering species. The tool that he will employ is called the chemical ionization high-resolution time-of-flight mass spectrometer, which is well suited to accurately identify and quantify a whole suite of inorganic and organic acid species in both the gas and particle phases.

Ben's approach is two-fold. First, he plans to probe the cascade of chemical oxidation byproducts of alpha-pinene and isoprene, the two dominant biogenically emitted species, in a controlled laboratory chamber. Though such experiments studying their chemistry have been performed in the past, the pathways, the range of products, and the relative abundances of these aerosol precursors are still ill-defined. Second, he will deploy this instrument on an aircraft platform over the southeast region of the U.S. which is influenced by high levels of both biogenic and anthropogenic VOC emissions. From this campaign, he will gain insight into the distribution of the many VOC byproducts in the open atmosphere that will help to reconcile the measurements of secondary organic aerosol and their gaseous precursors.





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Yi-Hsin Lin completed the Master of Science in Transportation degree at the Massachusetts Institute of Technology (MIT) in June 2013. She also received B.S. degrees from MIT in mathematics and music. She first became interested in aviation while working at Lincoln Laboratory where she worked on short-term weather forecasting for aviation. Continuing in that vein, her graduate research focused on weather impacts on aviation, particularly for terminal-area arrivals. Yi-Hsin is currently working as a software engineer at Kyruus, Inc, a Boston-based healthcare IT company. In her free time, Yi-Hsin enjoys travel, classical music, swimming, scuba diving, and reading.





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Dr. Yi Liu is currently a post-doc and instructor in the department of Civil and Environment Engineering at University of California, Berkeley. She received her Ph.D. in transportation engineering from Berkeley in summer 2015, MPhil degree in geotechnical engineering from HKUST in 2009, and bachelor degree in hydraulic engineering from Tsinghua in 2007.

Dr. Liu's research interests include air transportation, transportation economics, data analysis and statistical modeling. Liu has over 10 peer-reviewed journal papers and serve as a referee for several journals including transportation science and transportation research part C. Liu's dissertation studies predictability in strategic air traffic management. Recognizing the originality and contribution in Liu's dissertation work, Institute for Operations Research and the Management Science (Informs) has issued a press release to publicize it.

Liu co-organized the 5th International Conference on Research in Air Transportation in 2012 and served as a session chair at Informs since 2013. Liu received various scholarships and awards, including Federal Aviation Administration sponsored graduate research award on public-sector aviation issues, WTS Leadership Legacy Scholarship, and Robert Horonjeff Memorial Grant. In 2015, Liu is selected as an attendant of MIT CEE Rising Stars workshop.



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Brittany joined Georgia Tech as a doctoral student in civil and environmental engineering in 2008 and received a M.S. in industrial systems and engineering in 2010. Brittany's research focuses on investigating the impacts of early standby fees on airline customer service. Brittany is the recipient of several notable fellowships and scholarships, including a National Science Foundation (NSF) Graduate Research Fellowship, an Eisenhower Fellowship, and an Airport Cooperative Research Program (ACRP) Graduate Research Award on Public-Sector Aviation Issues. Brittany received her B.E. in civil engineering from Vanderbilt University in 2008.



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Jim Morrison is an airline marketing manager dedicated to promoting Bombardier's commercial aircraft lineup, including the Q400 NextGen turboprop, CRJ NextGen family, and the 100% new 100-149 seat CSeries. He holds a master of science in technology and policy from MIT, a bachelor of science in engineering physics from Queen's University, and is a licensed professional engineer in the Province of Ontario. As a research assistant at MIT International Center for Air Transportation (ICAT), Jim investigated the impacts of fuel cost increase on the U.S. air transportation system and performed a game theory analysis of the impact of single aisle competition on fleet emissions. Previously, Jim worked in the geospatial and remote sensing industry with Applanix Corporation as a Product Support Analyst. His current interests include: transportation systems, technology innovation, environmental policy, and backcountry skiing.



Stacey Mumbower

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Dr. Stacey Mumbower is a Clinical Assistant Professor at the University of South Carolina, in the Moore School of Business, and the Managing Director of the Moore School's Center for Applied Business Analytics. She received her Ph.D. in Civil Engineering, with a concentration in Transportation Systems, from Georgia Tech in 2013. She holds an M.S. in Statistics from Georgia Tech's School of Industrial and Systems Engineering and a B.S. in Mathematics from Valdosta State University.

Dr. Mumbower's research leverages online data to better understand airline pricing and product strategies, and how these strategies impact customers, as well as the industry in general. She compiles datasets that track fares, seat maps, and products displayed to online customers over the booking horizon. She has used these data to explore factors that influence airline customers' decisions to purchase premium coach seats and to estimate the revenue impacts of different seat pricing strategies. She has also used online data to estimate price elasticities of flight-level demand using instrumental variable methods. Her research has been published in *Manufacturing & Service Operations Management*, *Transportation Research Part A: Policy and Practice*, and *Transportation Research Record*. To address the lack of disaggregate airline data available to researchers, her airline pricing datasets were recently made publically available in *Manufacturing & Service Operations Management* as downloadable datasets with open-access. She uses these pricing datasets to develop hands-on activities that teach students how to use data analytics software, providing them with practical experience with analytics.

Prior to joining the Moore School, she was a post-doctoral Prevention Effectiveness Fellow at the Centers for Disease Control and Prevention, where she worked on resource allocation models for HIV prevention funding. She also spent two years as a statistical analyst in the Georgia Department of Transportation's Office of Transportation Data.





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Carey Anne is the Founder and CEO of Open Data Nation, a performance management consulting company that transforms open, public data into reliable predictions that mitigate risks to public health and safety. The FIVAR product, which predicts when a restaurant is likely to fail and inspection, has been featured in the Atlantic and GovTech Magazine in 2016. Learn more at opendatanation.com or @opendatanation.

Before founding Open Data Nation, Nadeau worked for the past decade doing quantitative research and analysis using open data at the Brookings Institution and Urban Institute. Nadeau's work has received multiple awards, including the O. Robert Simha prize for most outstanding contribution to planning by a School of Architecture and Planning student while at MIT and the Airport Cooperative Research Program Graduate Award, for her research evaluating the affordability of commutes by public transportation for low-wage workers at three airports. Nadeau holds a Masters in City Planning from Massachusetts Institute of Technology and a Bachelor of Arts in Political Science and Public Policy from The George Washington University. She lives and works in Washington DC.



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Dr. Nam is an assistant professor (2011 to present) of civil engineering at UCF. He received his Ph.D. in civil engineering at the University of Texas at Austin in 2010 and worked at the Center for Transportation Research as a postdoctoral researcher. Dr. Nam has been working in the areas of 1) the use of recycled materials in road construction, 2) nondestructive evaluation of pavement systems, and 3) materials microstructure characterization (pavement and geotechnical materials). He is current a member of (young committee) of TRB AFD80 and AFH30.



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Richard Penn is currently working as the Manager of Data Strategy and Decision Support for American Airlines within the Revenue Management department. Richard's team is responsible for empowering decision making and innovation within the commercial organization through the use of data, reporting, and business intelligence tools. Richard received his B.E. in industrial engineering from the University of Arkansas in 2007 and began pursuing his MBA in 2012 at the Georgia Institute of Technology. Prior to enrolling at Georgia Tech, Richard spent five years working in operations strategy for Wal-Mart Stores, Inc. at their corporate headquarters. A summer internship with American Airlines in 2013 opened Richard's eyes to the excitement of commercial aviation which led him to take a full time position with American Airlines upon graduating.



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Dominique Pittenger received her Ph.D. in general engineering at the University of Oklahoma where she had previously received her B.S. in construction science and M.S. in construction administration. Her specific expertise is in life cycle cost analysis of infrastructure assets such as highway and airport pavements. While a graduate student at the University of Oklahoma, she won an award as part of the ACRP Graduate Research Award Program on Public-Sector Aviation Issues for academic year 2010-2011, preparing research on "Airport Pavement Maintenance/Preservation Treatment Sustainability Using Life-Cycle Cost, Raw Material Consumption and 'Greenroads' Standards." She is currently serving on the National Research Council's Transportation Research Board Committee on Pavement Preservation (AHD18).

She also served on the National Science Foundation Panel for the Sciences behind Sustainability Quantification for Building and Infrastructure Design, Engineering, and Construction.

Dominique is Research Assistant Professor, College of Engineering, University of Oklahoma, and is currently serving on the National Research Council's Transportation Research Board Committee on Pavement Preservation (AHD18). She is Principal at Arbor Services, LLC. She is engaged in research on various topics for state highway agencies, the *National Cooperative Highway Research Program*, the *Airport Cooperative Research Program* and industry. She is the technical director of the *Southern Plains Transportation Center*, a regional UTC. She is an Educational & Training Program Advisor for the *Tashkent Automobile and Road Construction Institute* in Tashkent, Uzbekistan. Her hometown is Norman, Oklahoma. She is married and the mother of three children.



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Lauren Reddy has participated in a variety of research projects related to air transportation, including a NASA-funded project focused on reducing emissions in the commercial airline fleet and an FAA-funded project on developing an Air Connectivity Index. While a graduate student, she won an award as part of the ACRP Graduate Research Award Program on Public-Sector Aviation Issues for academic year 2014-2015, preparing research on, "Opinion Surveys to Reduce Uncertainty in Public and Stakeholder Perception of Unmanned Aircraft." Lauren currently works at Raytheon in Woburn, Massachusetts as a systems engineer on the Upgraded Early Warning Radar and Qatar Early Warning Radar programs. She holds a remote pilot's license and a private pilot's license.



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Stephen Remias received his BSCE from Michigan State University and an MSCE from Purdue University. He is currently a doctoral student in the School of Civil Engineering at Purdue. Steve has completed several projects in the area of airport security wait time measurements, origin-destination measurement techniques, traffic signal systems, and statewide mobility of traffic. He is currently on a USDOT Dwight D. Eisenhower Transportation Fellowship.



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Christian graduated with a doctorate of science degree in engineering management from The George Washington University in December 2010.

He has spent about 1/3 of the past 3 years working with HEAL Africa Hospital in the city of Goma in the eastern region of the Democratic Republic of Congo. There he was assisting local healthcare providers in establishing information management practices commiserate with needs and capabilities of low resource healthcare settings. This work is ongoing, and has now become the focus of his new position as an assistant professor of industrial engineering and engineering management at Western New England University in Springfield Massachusetts.



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Priyanka Sarker is a PhD candidate in the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign. At University of Illinois, Priyanka is working with Prof. Erol Tutumluer on a Federal Aviation Administration (FAA) funded project to investigate the damage mechanisms of airfield pavements due to new-generation aircraft wheel loading and wander patterns. In addition, she has also worked on developing Falling Weight Deflectometer (FWD) testing based mechanistic-empirical Hot Mix Asphalt (HMA) overlay thickness design procedures for low volume roads in Illinois to improve Illinois Department of Transportation's (IDOT) current Pavement Management system.

Prior to starting her PhD, Priyanka obtained her Masters from University of Akron in 2012 and her Bachelor of Science degree from Bangladesh University of Engineering and Technology in 2009, both in Civil Engineering. During her MS, Priyanka worked on a feasibility study to assess the performance of various pavement markings under service conditions in Ohio that aimed at improving safety on Ohio Department of Transportation's (ODOT) highway network. Priyanka's current research interests are related to the application of nondestructive testing technologies to build and maintain sustainable highway and airfield infrastructures. Priyanka received the Graduate Research Award from Federal Aviation Administration in 2016 to investigate airport pavement damage mechanisms under realistic traffic conditions.



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Kristin Schwarz is originally from Pennsylvania and obtained her bachelor's of science degree in biology at Susquehanna University. She is currently living in Mississippi and obtained her master's of science degree in wildlife and fisheries from Mississippi State University. Her thesis involved analyzing the FAA's National Wildlife Strike Database for mammal incidents with U.S. civil aircraft and estimating mammal use of two potential airport land-cover types to try to reduce mammal incidents.

Kristin has published several articles under her maiden name, Biondi, but recently married in May 2013. She is currently working for the National Park Service and hopes to continue a career of conservation education so that she may communicate the importance of wildlife and natural resources to the public.



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Dr. Nereyda Sevilla is the Chief Management Official for the Air Force Clinical Investigations Program. Nereyda entered the Air Force in 1997 after attending the United States Air Force Academy. She was selected to enter the Aerospace Physiology career field with an assignment at Holloman Air Force Base conducting centrifuge and altitude chamber training. She moved on to become the Aerospace Physiology Management Fellowship in the Office of the Surgeon General and completed a Masters in Public Health with a concentration in biostatistics and epidemiology. The assignment also included reviewing and accepting international aerospace physiology programs, revisions of aerospace physiology specific Air Force Instructions, coordination of Human Performance Training Team documentation and implementation. Further assignments included Chief of Human Performance Training Teams at Whiteman AFB, MO; Kunsan AB and Osan AB, South Korea.

As part of Team Aerospace, she worked closely with aerospace medicine, life support, wing safety, and other agencies to provide just-in-time human performance training needed to safely and effectively accomplish the missions. Nereyda separated from active duty in 2006, but continues her service in the Air Force as a civilian. Nereyda graduated from George Mason University with a concentration in Biodefense in 2017. Her dissertation was entitled "Germs on a Plane: The Transmission and Risks of Airplane-Borne Diseases."



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Stephanie Sherman is a Multi-Disciplinary Systems Engineer at MITRE. Her current work focuses on both airborne and ground-based sense and avoid for United States Air Force Unmanned Aircraft Systems (UAS), developing new technologies as well as establishing safety cases for the use of ground-based Air Traffic Control radars to enable UAS integration into the National Airspace System (NAS). She specializes in modeling and simulation analysis. Previous experience includes missile modeling and simulation for the Department of the Navy where she co-authored professional publications on missile evasive weave design and performance analysis.

Stephanie received a B.S. and M.S. in Aerospace Engineering from Virginia Tech. As part of her graduate research, she built a model simulating a decentralized NAS in which multiple-aircraft interaction was based on Smoothed Particle Hydrodynamics methodology. Her research was funded by the Institute for Critical Technology and Applied Science and awarded a Virginia Space Grant Consortium Graduate Research Fellowship as well as a 2014-2015 ACRP Graduate Research Award.

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Ioannis Simaiakis is a Management Consultant with McKinsey's Operations Practice in Washington, DC. He received his Ph.D. in aeronautics and astronautics from the Massachusetts Institute of Technology. His research focused on the development of new estimation techniques, queuing models, and dynamic programming algorithms for predicting taxi-out times in the airport terminal area, and for airport operations planning under uncertainty. He is the recipient of the Kevin Corker Award for Best Paper in the USA/Europe Air Traffic Management Research and Development Seminar (2011) and the CNA Award for Operational Analysis (2012). He is currently mainly interested in the integration of strategy and operations in large organizations.



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Emerald Simons holds a Bachelor of Science Degree in Mechanical Engineering and a Master of Science Degree in Applied Engineering with a concentration in Energy Science from Georgia Southern University. She pursued engineering after separation from service as an Apache Attack Helicopter Repairer. Longing to get back into the field of aviation, she worked towards a career in the aerospace industry. Her master's thesis was on the combustion sound and vibration characteristics of an aero-derivative gas turbine, with focus on the use of alternative fuels. She is currently an Acoustics and Vibration Engineer at Gulfstream Aerospace Corporation. Outside of work, she enjoys spending time with her husband and daughter, cooking, and eating.



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Navaneethan Sivagnanasundaram, M.A., is a graduate student currently enrolled in the Human Factors Psychology PhD program at Wichita State University (WSU) in Wichita Kansas. He is a member of the Laboratory of Applied Visual Attention (LAVA) at WSU and his research focuses on the visualization of information for human-machine interfaces. Navaneethan's research explores how human visual perception and cognitive processes interact with the physical and temporal aspects of interface elements. He is a 2014-2015 Transportation Research Board *Graduate Award Program on Public Sector Aviation Issues* recipient, studying the design and efficiency of air traffic symbology in navigation displays. Navaneethan has experience designing and evaluating interfaces for commercial aircraft, unmanned vehicles and a variety of consumer products.

Navaneethan's awards include a Postgraduate Scholarship from the National Science & Engineering Research Council (NSERC) of Canada, a Certificate of Excellence from the Canadian Psychological Association (CPA) and two Undergraduate Research Awards (also awarded by NSERC). He is a student member of the Human Factors and Ergonomics Society (HFES) and Vision Sciences Society (VSS).



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Clayton Stambaugh serves as an Aviation Facilities Specialist for the Illinois Department of Transportation (IDOT). In addition, he provides support to Department efforts relating to ports and waterways. He previously served as airport Manager at Pekin Municipal Airport and sat on the executive committee with the Illinois Public Airports Association (IPAA) as First Vice Chairman. Stambaugh participates on multiple projects with the Airport Cooperative Research Program (ACRP) - Transportation Research Board (TRB) of the National Academy of Sciences (NAS). Stambaugh is a standing member and committee communications coordinator for the TRB Committee on Intergovernmental Relations in Aviation. Stambaugh also leads marketing and communication efforts for the upcoming 10th National Aviation System Planning Symposium.

Stambaugh is a graduate of Southern Illinois University Carbondale (SIUC), where he obtained a Master of Public Administration degree focusing on Aviation Administration. He served as a graduate assistant working with various partners in the National Airport Safety Data Program of the Federal Aviation Administration (FAA). His primary graduate research focused on using digital technologies, such as social media, to improve airport communication, public relations, and marketing. Stambaugh holds a Bachelor of Science degree in Aviation Management and an Associate of Applied Science degree in Aviation Flight from SIU. In addition, he holds a Commercial Pilot Certificate for Airplane Single and Multi-Engine Land with an Instrument Airplane rating, as well as a Remote Pilot Certificate. Stambaugh will be teaching Aviation Security Regulations and Management during the Spring 2018 semester at SIUC.





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Jeff Stempihar is currently an Assistant Research Professor at Arizona State University with a research emphasis on sustainable pavement materials, performance characterization of asphalt concrete, and data collection for transportation systems research. He is also a professional civil engineer and has spent several years working on design and construction of airfields and airport facilities. In addition, Jeff teaches civil engineering courses related to airfield design and pavement materials. He serves on technical committees, is active in mentoring students and involved in his local community. In his spare time, he enjoys spending time outdoors with his family.



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Daniel Suh is a PhD student in the Department of City and Regional Planning at the University of Pennsylvania studying under Dr. Megan Ryerson. His dissertation work focuses on systematic evaluation of aviation demand forecast accuracy and airport expansions. Previous works include modeling of a large neighborhood heuristic for an optimal ad-hoc hubbing strategy in an airport outage and conducting sensitivity analysis for an air and rail diversion model. Daniel received a Master's degree in City and Regional Planning at the University of Pennsylvania while working at AECOM as an aviation intern and Delaware Valley Regional Planning Commission (DVRPC) as a Long-Range Planning intern. He holds a Bachelor degree in economics from Brandeis University and is on course to receive a dual Master's degree in statistics from Wharton.



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Dr. Yanshuo Sun is a research scientist at the National Transportation Center of the University of Maryland. He received his doctorate (2016) and second master's degree (2016) in transportation engineering from the same institution. Prior to that, he received his first master's degree (2012) from Tongji University and bachelor's degree from Southwest Jiaotong University in China. Dr. Sun has broad research interests in transportation optimization problems, especially in public transit, air transportation, ridesharing, and multi-modal freight systems. As a recipient of a 2015-2016 Airport Cooperative Research Program Graduate Award, he studied how to coordinate the development of various airport components in a dynamic and uncertain environment. His research findings from his doctoral dissertation on the same topic have been published in *Transportation Research Part B* and *Journal of Advanced Transportation*. In addition to the graduate research award sponsored by the Federal Aviation Administration (FAA), he also received awards from the Airport Council International – North America (ACI-NA), the American Railway Engineering and Maintenance-of-Way Association (AREMA), and the American Public Transportation Association (APTA).



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Prem Swaroop is a doctoral alumnus of Robert H Smith School of Business and Institute for Systems Research at University of Maryland, where his adviser was Prof Michael Ball. He currently serves as Principal Data Scientist with Altisource Labs at Boston in the domain of Financial Analytics. Over the last couple of years, he has developed and deployed machine learning and optimization models that have been used to list and sell over 10,000 houses across the US. His research and practical interests lie in the areas of optimization, revenue management, statistical machine learning, and information visualization.



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Maulik Vaishnav recently joined the Chicago Transit Authority (CTA) as a resource planner in the agency's planning analytics team. Prior to CTA, he was a transportation planner for Arup in San Francisco. An urban planner and economist by training, Maulik focused on aviation policy in graduate school at the University of Illinois in Urbana-Champaign. His ACRP graduate program research included case studies of five Essential Air Service Program communities to understand the local support for a federal program supporting declining small community air service. Maulik is currently a member of AV010 Intergovernmental Relations in the TRB Aviation Committee.





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Parth Vaishnav is currently working towards a PhD at Carnegie Mellon University's Department of Engineering and Public Policy. His research focuses on the economics of reducing greenhouse gas emissions from civil aviation.

Before starting at CMU, he worked for an international oil and gas company in Singapore and The Netherlands.

Parth holds a master's degree in technology policy from the University of Cambridge in the UK as well as a master's degree in product development and a bachelor's degree in mechanical engineering from the National University of Singapore.



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Vikrant Vaze is an Assistant Professor of Engineering at Dartmouth College. Before joining the Dartmouth faculty in 2014, he worked in the industry for two years as a member of research staff at Philips Research. Earlier, he was a post-doctoral research associate at the Massachusetts Institute of Technology (MIT) where he received his PhD in Systems 2011. He also received an MS in Operations Research and another MS in Transportation, both from MIT, and a bachelor of technology degree from the Indian Institute of Technology (IIT) in Bombay. His research interests include applications of optimization, game theory, mechanism design, statistical modeling and data mining methods to problems in logistics, transportation, energy, and healthcare.

While a graduate student at the Massachusetts Institute of Technology, he won an award as part of the ACRP Graduate Research Award Program on Public-Sector Aviation Issues for academic year 2010-2011, preparing research on, "Airline Frequency Competition in Airport Congestion Pricing." He is also the recipient of a number of academic and research honors, including the Pikarsky Award for Outstanding Doctoral Dissertation from the Council of University Transportation Centers, best paper awards from AGIFORS and from FAA/EUROCONTROL, merit-based doctoral student fellowship from UPS, Presidential Fellowship from MIT, and the President of India Gold Medal from IIT Bombay.



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Kleoniki Vlachou is a Ph.D. candidate at the University of Maryland under the supervision of Professor David Lovell. Her research focuses on applications of operations research techniques to problems in air traffic management and more specific to aviation congestion management. She has worked on numerous projects funded by Federal Aviation Administration and NASA. She received a B.S. degree in Civil Engineering from the National Technical University in Athens, Greece, and a M.S. degree in transportation engineering from the University of Massachusetts, Amherst.



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Dr. Thomas Wall is an Infrastructure and Preparedness Analyst with the Risk and Infrastructure Science Center at Argonne. He leads Argonne's Climate Impact Data and Risk Analysis effort, which aims to leverage Argonne's deep capabilities in climate science and modeling, advanced computing, infrastructure risk analysis, and decision science to provide actionable climate impact information to the engineering and planning communities, to industry, and to state and local governments.

Tom also has extensive experience in the area of critical infrastructure analysis and protection, and has supported infrastructure analysis projects for the U.S. Department of Homeland Security (DHS), Federal Emergency Management Agency, and state and local governments. Notably, he has led efforts in the DHS Regional Resilience Assessment Program, which directly engages with communities and regional stakeholders to identify infrastructure risks and dependencies, and then develop strategies to enhance the resilience of those systems to climate, natural disasters, and other hazards.

Tom earned an Honors BS in Civil Engineering at Oregon State University, and an MS and PhD in Civil Engineering from the Georgia Institute of Technology, where his research focused on climate resilience, adaptation, and infrastructure management for transportation systems.



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Jinfeng Wang received her bachelor's degree at Beijing Forestry University in China, with a major in forestry. She completed her masters in environmental sciences under Dr. Huaicheng Guo at Beijing University in China, where she attained skills in watershed modeling, spatial analysis and data management. She studied environmental engineering at the University of Illinois at Urbana-Champaign under Dr. Edwin Herricks.

During her graduate studies, Jinfeng has gained extensive experience in statistical analysis and programming and performed extensive research requiring statistical analysis of biological and environmental conditions. As a research assistant in Dr. Herricks research group, Jinfeng has participated projects focusing on airport wildlife mitigation, and performed advanced statistical analysis and modeling studies to develop a risk assessment model of flight hazards near airports. Part of her studies has been utilized in FAA wildlife hazard management. Because of her expertise in statistics, Jinfeng became a statistical programmer after graduation. She is now working at Gilead Sciences Inc. in support of Gilead research efforts related to clinical trials and pharmaceutical studies.



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Jason Wong is a Ph.D. Candidate in Sustainable Development at Columbia University and a Research Affiliate at Laboratory for Aviation and the Environment of Massachusetts Institute of Technology.

Jason is interested in the impact of technology and infrastructure in regional socioeconomic outcomes and environmental decision making. His dissertation focuses on improving individual carbon offsets, economic impacts of aviation connectivity, and climate change impacts on aviation. He also works on electricity infrastructure and energy poverty in India.

Jason graduated summa cum laude from the University of Maryland with a B.S. in Environmental Science and Policy (Environmental Economics) with High Honors and a B.A. in Germanic Studies. He also completed a Minor in Statistics and a Certificate in Science, Technology, and Society. He was a College Park Scholar in Science and Global Change, a National Oceanic and Atmospheric Administration Ernest F. Hollings Scholar and a German Academic Exchange Service Undergraduate Scholar. In 2013-14, he was a Phi Kappa Phi Walter and Adelheid Hohenstein Fellow. In 2015-16, he served as Lead Teaching Fellow at Columbia University. He won the 2017 Presidential Award for Outstanding Teaching by Graduate Student Instructors, the highest teaching honor bestowed upon a graduate student at Columbia. He is a 2016-2017 ACRP Graduate Research Awardee.

Originally from Hong Kong, Jason has since lived in Shanghai, Washington D.C., Charleston, SC, Miami, FL, Hamburg, Germany, Boston, MA and currently resides in New York City. Outside of the teaching and research, he has developed a passion for languages. He speaks Cantonese, Mandarin, and German fluently and is currently learning French and Japanese.



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Amber worked as an undergraduate research assistant with the NEXTOR group at UC Berkeley specifically under the mentorship of Dr. Mark Hansen and his doctoral student, Megan Ryerson. After receiving her B.S., Amber worked for the Federal Highway Administration (FHWA) for two years. In 2011, Amber decided to pursue graduate level education with an emphasis on transportation systems. As a graduate student, she has participated in a range of aviation research and sustainable intercity transportation planning research.



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Rebekah Yang is currently a systems engineer at CNA, a non-profit research and analysis organization based in the Washington D.C. metro area. She works to support the Federal Aviation Administration in its efforts to modernization air traffic management. Rebekah received her Ph.D. (2017) from the University of Illinois at Urbana-Champaign with Dr. Imad Al-Qadi. She received her master's degree also from Illinois and her bachelor's degree from Swarthmore College. While at Illinois, Rebekah's research interests focused primarily on evaluating the sustainability of transportation infrastructure, specifically highway and airfield pavements. Rebekah was part of the 2015–2016 ACRP Graduate Research Award program, which allowed her to conduct research on the application of life-cycle assessment to airfield pavements.



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Before her Ph.D., Zhou studied Mathematics and Economics at Vanderbilt University and worked for two years as an Analyst at Wachovia Bank (now Wells Fargo). She also spent ten months traveling around the world with her husband on their honeymoon.



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