



Harnessing the power of big data to improve transportation system performance and guide transportation investments and policies

**2017 CUTC Annual Summer Meeting - June 19-21, 2017 @ Buffalo, NY**

Transportation Informatics Tier I University Transportation Center (TransInfo) has been selected to host the 2017 Annual Summer Meeting of the Council of the University Transportation Centers (CUTC)! The three-day event will feature distinguished speakers including keynote addresses, presentations, panels and guided discussions covering a broad range of topics related to transportation university research, education and technology transfer. [Registration is now open!](#)

*CUTC 2017 Annual Summer Meeting*

*June 19 - 21, Buffalo, NY*



**Interdisciplinary Master of Science Program in Sustainable Transportation and Logistics**

UB's Institute for Sustainable Transportation & Logistics Master's Program is designed to train globally competitive graduates who are well rounded technically and managerially, and who intend to assume leadership positions in transportation and logistics. The program is jointly offered by the [School of Engineering and Applied Sciences \(SEAS\)](#) and the [School of Management \(SoM\)](#), thus offering students a truly trans-disciplinary program, that is distinct to the University at Buffalo. **Applications for the Master's degree in Sustainable Transportation and Logistics are now being accepted for Fall 2017!** For more information, please visit our [Website](#) or email [eiliadou@buffalo.edu](mailto:eiliadou@buffalo.edu).



**Applications for the Master's degree in Sustainable Transportation and Logistics are now being accepted for Fall 2017!** For more information, please visit our [Website](#) or email [eiliadou@buffalo.edu](mailto:eiliadou@buffalo.edu).

## Research Spotlight



### Twitter data could improve subway operations during big events

A preliminary study by researchers at the University at Buffalo's School of Engineering and Applied Sciences suggests that data from Twitter, and possibly other social media platforms, can be used to improve event planning, route scheduling, crowd regulations and other subway operations. [Read more.](#)

The study was conducted by **Dr. Qing He**, Stephen Still Assistant Professor at UB's Department of Civil, Structural and Environmental Engineering and the Department of Industrial and Systems Engineering. Co investigators are **Dr. Jing Gao**, Assistant Professor at UB's Department Computer Science and Engineering, and **Ming Ni**, PhD candidate at UB's Department of Industrial and Systems Engineering.

An early version of the study, "[Forecasting the Subway Passenger Flow under Event Occurrences with Social Media](#)", was published online in October in the journal IEEE Transactions on Intelligent Transportation Systems. The study will appear in an upcoming print edition of the journal.

---

### Transportation Week at the University of Puerto Rico (Mayaguez)

The Student Chapter of the Institute of Transportation Engineers of the University of Puerto Rico at Mayaguez (ITE-UPRM) celebrated its annual Transportation Week between March 7 and 9, 2017. The event took place in the Civil Engineering Building where various professionals, from both the private and public sector, presented several topics related to the future of the transportation in Puerto Rico. Eng. Carlos Contreras, Secretary of the Department of Transportation of Public Works of Puerto Rico, was the keynote speaker on Tuesday, March 7, followed by the President of ITE - Puerto Rico Chapter, Ivelisse Gorbea. Later that day, Dr. Benjamin Colucci gave a presentation regarding Public-Private Partnerships and their role in the island's economy. On Wednesday morning Eng. Maribel Perez informed the public about the initiatives of the program "Every Day Counts"; late in the afternoon the UPRM Traffic Bowl competition was hosted by Dr. Ivette Cruzado.



Puerto Rico's Strategic Plan for Highway Safety was presented by Juan Carlos Rivera on Thursday morning. Transportation Week concluded on March 9 with two presentations; the first presentation was related to safety of pedestrians and cyclists (presented by Martha Bravo and Eng. Yilia Baucage-Bou) and the second presentation was related to incident management (presented by Eng. Josue Cruz and Eng. Ashley Vargas). Transportation Week was dedicated to Dr. Ivette Cruzado who is the ITE-UPRM adviser. "It is important to recognize the effort of

the students as they were the ones who organized this event by themselves. There is an education that goes beyond the classroom and this was achieved during Transportation Week" said Dr. Cruzado.

---

### Feature Awards, Honors & Activities

**Dr. Qing He** has been awarded funding from NSF CMMI 1637604. "EAGER: Collaborative Proposal: Towards Dynamic Social Ride-sharing: An Essential Component in Envisioned Smart Communities". August 2016 - July 2018

**Dr. Qing He and Dr. J. Gao** have been awarded funding from UTRC2 "Inferring High-Resolution Individual's Activity and Trip Purposes with the Fusion of Social Media, Land Use and Connected Vehicle Trajectories", September 2016 -December 2017

**Dr. Qing He and Dr. Amjad Aref** have been awarded funding (\$346k) from USDOT/Federal Rail Administration for the project titled "Data-Driven Optimization and Planning of Multi-Component Track Responsive Maintenance with Defect Deterioration Modeling".



**Prof. Jamie Kang and Prof. Mark Karwan** received funding from the National Science Foundation for a project entitled Household-Level Use of Autonomous Vehicles: Modeling Framework,

**Prof. Jamie Kang** and **Prof. Alexander Nikolaev** have been awarded funding from NSF, for EAGER: Inferring Comprehensive Individual Traveler Information in Multi-Modal Travel Environment Using Automatic Fare Collection Data (\$149,999) 2016-2018

**Dr. Xuegang (Jeff) Ban** has moved to the University of Washington. [Read more.](#)

---

## Recent Publications

- Dr. Panagiotis Anastasopoulos, Dr. Adel Sadek, Dr. Nallan Suresh: "Evaluation of Public-Private Partnership Contract Types for Roadway Construction, Maintenance, and Rehabilitation". [Read more.](#)
  - Dr. JiYoung Park, Dr. Changhyun Kwon: "The Ties that Bind: Bi-national Trade and its Implications of the U.S. and Canada Using Bi-national Freight Movement Network via Border Crossings". [Read more.](#)
  - Dr. JiYoung Park: "Panama Canal Expansion: The Effect of Imports and Exports Diverted from California Seaports on the Port of New York and New Jersey". [Read more.](#)
  - Xi Zhou, Dr. Mohan M Venigalla, and Dr. Shanjiang Zhu: "A Bounding Box Approach to Network Pruning for Efficient Path Search through Large Networks", ASCE's Journal of Computing in Civil Engineering (2017). The paper is focusing on data driven approach for network analysis.
  - Dr. Shanjiang Zhu, Hamza Masud, Chenfeng Xiong, Zhuo Yang, Yixuan Pan, and Lei Zhang, (2017) "Travel Behavior Reactions to Transit Service Disruptions: Case Study on Washington, D.C., Metro SafeTrack Project", Transportation Research Record: Journal of Transportation Research Board (2017).
  - Dr. Shanjiang Zhu, Gege Jiang, Hong Lo: "Capturing Value of Reliability through Road Pricing in Congested Traffic under Uncertainty" forthcoming in the Procedia of the 22nd International Symposium on Transportation and Traffic Theory (ISTTT 2017). The paper focuses on using pricing as a tool to capture the value of reliability.
- 



## Recap: 2017 Transportation Research Board Annual Meeting

January 8 - 12, 2017  
Washington, D.C.

The Transportation Research Board (TRB) 96th Annual Meeting took place January 8-12, 2017 at the Walter E. Washington Convention Center, in Washington, D.C. The TransInfo University Transportation Center alongside the University of Buffalo hosted a reception on Monday evening welcoming over 150 attendees of the meeting. In addition to

hosting the reception, a large contingent of TransInfo faculty and students participated in the conference with presentations, papers and posters. [Learn more](#)

**Maria Torres**, a Master's Degree Student in the Transportation Engineering Program of the University of Puerto Rico at Mayaguez (UPRM), was selected as **the 2016 Student of the Year** for the Transportation Informatics Tier I University Transportation Center. She was honored by the U.S. Department of Transportation (USDOT) at a special ceremony held during the meeting.



---

### About us

*Transportation Informatics Tier I University Transportation Center (TransInfo) is a consortium of four national universities that is led by the State University of New York at Buffalo (UB). TransInfo collaborates with government, industry, academia, and policy makers around the globe to mine the wealth of transportation-related big data to develop insights and applications that can improve the efficiency, safety, sustainability, resiliency and reliability of the transportation system, and can inform and guide transportation policy.*

*TransInfo Partner Universities are: Rensselaer Polytechnic Institute (RPI), George Mason University (GMU), and the University of Puerto Rico-Mayagüez (UPR-M). CUBRC, a not-for-profit, research corporation headquartered in Buffalo, NY, serves as a non-member partner.*



Transportation Informatics Tier I University Transportation Center  
716.645.5465 | [www.buffalo.edu/transinfo](http://www.buffalo.edu/transinfo)