

UNIVERSITY TRANSPORTATION RESEARCH CENTER

RESEARCH NEWS

Fall 2014

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THE THIRD CONNECTED AND AUTONOMOUS VEHICLE SYMPOSIUM: SMART CITY MARKET ALIGNMENT FOR ROADWAY TECHNOLOGIES (SMART)



The UTRC's third annual Connected Vehicle Conference took place at the SUNY Polytechnic Institute on November 5th 2014. The conference was a big success as the subject received support from state and local government. The New York State Department of Transportation Commissioner, Joan McDonald, Congressman Paul Tonko, and Senior Vice President for Cisco's Technology Group, Helder Antunes delivered keynote addresses at the conference. The conference outlined two plenary sessions; National Connected Vehicle Landscape led by Richard McDonough from NYSDOT and Transitioning Innovation to Commercialization led by Michael Fancher from SUNY Polytechnic Institute. There were four information-rich panels (listed below) featuring presentations from experts in public and private sector.

- 1- University-based Research Assets
- 2- Industry-driven Tech Roadmap
- 3- Government-directed Framework
- 4- Investment Strategies to Enable Success

The keynote addresses and speakers' presentations are available on the conference website: <http://www.connectedvehicleworkshop.com/>

THE FORMATION OF THE SMART CONSORTIUM FOR THE CONNECTED/AUTONOMOUS VEHICLES DEPLOYMENT IN NEW YORK

Following the symposium success, SUNY Polytechnic Institute and the University Transportation Research Center (UTRC) for Region 2 (New York, New Jersey and Puerto Rico) organized a meeting on November 6th, 2014 to establish the SMART Consortium with representatives from industry, government and academia to participate in the definition of its Vision, Mission, Goals and Objectives. Peiwei Wang, Ph. D. of Noblis and Kate Hartman of USDOT presented at the workshop to provide more detail on the 2015 USDOT solicitations.

"The SMART Consortium seeks to establish the framework for collaboration by using Connected and Autonomous Vehicles as a pathway to align industry, government and academia to systematically address the broad array of technology, market and business challenges that hinder the deployment of solutions in Smart Cities or the Internet of Things (IoT) which is estimated to be over a \$2 trillion market (in 2014)".



To accomplish this, SUNY Poly and UTRC seek to build upon and establish new partnerships with: key government agencies (including NYSDOT, NYCDOT, MTA, DMV, NYSEDA, NYS Broadband, ESDC and NYS CTO, among others); top academic institutions (including SUNY Poly, NYU-CUSP, University at Buffalo, RPI, University at Albany, CUNY, and Columbia, among others); and, industry leaders (including Cisco, IBM, Intel, GE, Siemens, Analog Devices, Kapsch, Perkin Elmer, Southwest Research Institute and Parsons Brinkerhoff, among others) to define and drive the proposed SMART Consortia. Once defined, the SMART consortia members would be asked to provide guidance on the development of an integrated technology roadmap, expanding commercialization pathways and dynamic economic outreach strategies.

More details will be posted on the website about the progress of the SMART Consortium.
<http://www.connectedvehicleworkshop.com/consortium/>



Commissioner Joan McDonald, New York State Department of Transportation's



Congressman Paul Tonko, (NY-20th District)



Joah Sapphire, Global Dynamic Group, LLC
(Master of Ceremony)



Michael Fancher, SUNY Polytechnic Institute



2014 Connected & Autonomous Vehicle Conference: The Smart Consortium Group Photo

GROUND TRANSPORTATION TECHNOLOGY SYMPOSIUM: BIG DATA AND INNOVATIVE SOLUTIONS FOR SAFE, EFFICIENT AND SUSTAINABLE MOBILITY



From L to R: Amen Ra Mashariki, NYC Chief Analytics Officer, NYC Mayor's Office; Camille Kamga, UTRC Director; Matthew W. Daus, UTRC Distinguished Lecturer; Robert E. Paaswell, UTRC Director Emeritus; Mahdieh Allahviranloo, Assistant Professor, CCNY; Nicholas O'Brian, NYC Mayor's Office

Following the success of the 2013 GPS Symposium, UTRC hosted another successful conference on Ground Transportation Technology addressing Big Data and Innovative Solutions for Safe, Efficient and Sustainable Mobility on November 19th, 2014 at the New York Institute of Technology. UTRC's distinguished lecturer Matthew W. Daus was the chair of the organizing committee.

Hon. Council Member Ydanis Rodriguez, Chair of the New York City Council's Transportation Committee delivered the introductory remarks and talked about his transportation progressive agenda. To view the video of this speech, please see the following link: <http://vimeo.com/114064775>. The afternoon keynote speaker was Dr. Amen Ra Mashariki, the newly appointed Chief Analytics Officer who leads the Mayor's Office of Data Analytics (MODA). Dr. Mashariki spoke about MODA's role and plans to address the open data issues in the city. To view the Keynote Speech, click here <http://vimeo.com/114130662>. For media coverage of the keynote speech, please see <http://www.capitalnewyork.com/article/city-hall/2014/11/8557154/transit-event-new-city-analytics-head-stresses-sharing>

There were eight sessions throughout the summit, moderated by highly skilled transportation professionals and featured presentations from impeccable speakers throughout the public and private sector, conducting transportation related research addressing data issues.

This unique summit brought together leading experts, academics, practitioners, industry stakeholders and advocates to discuss the rapidly changing and expanding world of transportation technology innovative solutions. The presenters explored the cutting-edge intelligent transportation systems, big data aggregation, and innovative transportation technology solutions promote efficiency, safety, security and sustainability goals, as well as the impact on broader inter-modal and multi-modal transportation considerations.

The event aimed to encourage future and forward thinking innovative concepts and the pragmatic political reality of various movements (such as climate change/environmental policies and safety initiatives for reduced traffic fatalities). Vision Zero will be discussed extensively, as well as the use of smartphone apps, black boxes, red light and speed cameras.

The symposium proceedings including presentations, videos, and images are available on the UTRC's website at: <http://utrc2.org/events/ground-transportation-technology-symposium>

A detailed column summarizing the symposium speeches authored by Mr. Daus can be accessed at the utrc website at: <http://www.utrc2.org/events/ground-transportation-technology-symposium>



From L to R: Dr. Nada Marie Anid, Dean of School of Engineering and Computing Sciences, NYIT, Honorable Ydanis Rodriguez, NYC Council Member, Chair, Transportation Committee, Dr. Camille Kamga, UTRC Director



Session 7 Speakers - From L to R: Reuben Juster, Faculty Research Assistant, CATT, University of Maryland; Felisa Vazquez-Abad, Professor, Hunter College, CUNY; dieh Allahviranloo, Assistant Professor (Moderator), CCNY; Michalis Xyntarakis, Senior Associate, Cambridge Systematics



Session 3 Speakers - From L to R: David King, Assistant Professor, Columbia University; Kenneth Esirim, Doctoral Student, Graduate Center, CUNY; Matthew W. Daus, UTRC Distinguished Lecturer; Anil Yazici, Assistant Professor, Stony Brook University, SUNY



Chris Brogan, Founder & Chairman, AssureNet



Ron Srebro, CEO, GETT USA

VOLVO RESEARCH AND EDUCATIONAL FOUNDATIONS (VREF) METROFREIGHT TEAM VISIT AT UTRC



A Group Photo of VREF MetroFreight Team Members during their Visit at UTRC at CCNY

UTRC hosted the Volvo Research and Educational Foundations (VREF) MetroFreight team on October 27, 2014 at the City College of New York to discuss the team's current and future work as a Volvo Center of Excellence in urban freight and logistics. Members attended from all four locations comprising the MetroFreight team— The lead partner, University of Southern California (USC)/California State University Long Beach (CSULB); IFSTTAR-French Institute of Science and Technology for Transport, Development and Networks University, Paris; The Korea Transport Institute (KOTI), Seoul; and UTRC with participants from CCNY, Hofstra University, Columbia University, and SUNY Buffalo.

The team is progressing with the second year of a five year program to research ways to improve the transportation, storage and handling of goods in city centers using Los Angeles/Long Beach, Paris, Seoul, and New York as the test locations.

The team members had also convened in New York City to attend and participate in a workshop sponsored by VREF on October 28-30, 2014 in conjunction with the Ford Foundation, Rockefeller Foundation, TransitCenter, the American Assembly, the Regional Plan Association, the Institute for Transportation and Development and the Center for Sustainable Urban Development (CSUD) at Columbia University on Transforming access, mobility and delivery in cities. Working with CSUD, the MetroFreight team organized a panel session titled Why bother about urban freight? MetroFreight partner Laetitia Dablanc, Director of Research from IFSTTAR, led the panel as moderator, and UTRC researcher Alison Conway, Ph.D, from CCNY's Department of Civil Engineering served as a discussant alongside Michael Browne of the University of Westminster. Participating panelists included many New York City freight experts - Joe Dack (HDR), Andrew Genn (NYC EDC), Stacey Hodge (NYC DOT), and Howard Mann (NYMTC), as well as Nomeshe Bolia (IIT Delhi). The panel covered a broad range of urban freight-related issues, including the broad impacts of freight as a facilitator of economic development and generator of social costs; new trends in freight demand such as e-commerce and just-in-time deliveries; and public policies, urban design, and stakeholder communications for improved freight planning and operations.

During the event, MetroFreight team members participated in other panels as well. David King, Ph.D, from Columbia University's Department of Architecture, Planning, and Preservation was one of the discussants during the panel on How do we best design, and implement access, including affordable and safe public transit? Genevieve Giuliano, Director of METRANS Transportation Center and professor at USC's Price School of Public Policy was a speaker during the panel session, What are the challenges and opportunities for reforming the governance institutions of urban transport and land-use?

MetroFreight Team members from UTRC include Alison Conway, Ph.D., CCNY; Penny Eickemeyer, UTRC; Camille Kamga, Ph.D., Director of UTRC; David King, Ph.D., Columbia University; Ben Miller, UTRC; Robert(Buz) Paaswell, Ph.D., CCNY; Jean-Paul Rodrigue, Ph.D., Hofstra University; Elliot Sclar, Ph.D, Columbia University; and Qian Wang, Ph.D., SUNY Buffalo.

EDUCATION

SEPTEMBER 11TH MEMORIAL PROGRAM-2014-15

The NYMTC/September 11th Memorial Program Academic Initiative entered its ninth year of the program in September 2014. In August, a selection committee comprised of representatives from NYMTC and its members awarded two students with internship positions for the 2014-2015 academic year. The awardees included:



Dan Wan, Ph.D. candidate, Civil Engineering (transportation), CUNY Graduate Center

Internship Supervisor – Aaron Sugiura, NYCDOT

Faculty Adviser-Camille Kamga, Ph.D., Assistant Professor Civil Engineering and Director, UTRC

Internship Topic: Customer Perception of Select Bus Service Enhancements

Through her internship at NYCDOT, Dan will distribute a survey to select bus customers to try to determine how bus riders perceive different elements of SBS, including advanced off-board fare payment, traffic signal priority, improved bus lanes, real time bus arrival information, and BRT vehicles. This information will help NYCDOT and NYCT design future SBS routes to maximize the elements that have positive impacts on ridership.



Gauri Jumde, Master's candidate in urban planning at the Robert F. Wagner Graduate School of Public Service at NYU

Internship Supervisor, Larry McAuliffe, NYMTC

Faculty Adviser, Zhan Guo, Ph.D., Professor of Urban Planning and Transportation Policy, Wagner School of Public Service, NYU

Internship Topic: Development of a Regional Bicycle-Pedestrian Handbook

Gauri will participate in an internship at NYMTC on a project related to the development of a Regional Bicycle-Pedestrian Handbook. Her involvement in the project will be supervised jointly by her NYMTC supervisor, Larry McAuliffe, and Penny Eickemeyer of UTRC. Her faculty advisor is Dr. Zhan Guo.

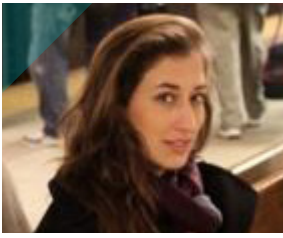
Gauri will assist NYMTC in the development of a Bicycle-Pedestrian Handbook. Through her work, she will research best practices and work with stakeholder groups in order to determine the most beneficial information for the handbook.

The New York Metropolitan Transportation Council (NYMTC) established the September 11th Memorial Program for Regional Transportation Planning to honor the memory of Ignatius Adanga, Charles Lesperance, and See Wong Shum, the three employees it lost during the attack on the World Trade Center. The program was established to educate and motivate people interested in transportation technology and planning and to encourage innovations in planning activities throughout the NYMTC region. The Program's Academic Initiative is designed to foster the academic and professional development of students by providing them with opportunities to participate in innovative research and planning projects. It is administered by the University Transportation Research Center (UTRC).

UTRC AWARDS 2014 AITE SCHOLARSHIP

This year, UTRC has held two rounds of competition for the Advanced Institute for Transportation Education (AITE) Program. The program aims to increase the knowledge and capabilities of transportation professionals by providing master's level education in transportation and related fields. The program provides scholarships to full-time students as well as to agency employees endeavoring to increase their knowledge and skills at UTRC member Universities. The program requires matching resources to be contributed either by the participating university for full-time student recipients, or by the employer agency for employee applicants. The University match can be provided in the form of tuition support, non-federally funded fellowship or scholarship support, or faculty release time to support the student's research. The agency match is provided in the form of work-release-time valued by the employee's salary.

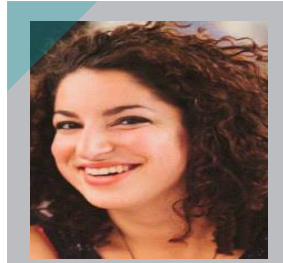
Five scholarships were awarded in June 2015 for the Fall 2014 semester. Detailed information on the Fall 2014 AITE Scholarship recipients is provided below. Additional awards will be made in December for students whose support will begin in Spring 2015.



NAJWA DOUGHMAN

New York University

Najwa Doughman is currently pursuing a Master of Urban Planning at New York University's Robert F. Wagner School of Public Service with a concentration in International Development. She holds a Bachelor of Science degree in Architecture from the University of Virginia and has since acquired 5+ years of design, planning and construction project management experience in Egypt, Lebanon, Washington D.C. and New York City. Through the AITE Scholarship Program, she is researching the incentives, obstacles and impacts of Long and Super-commuting into the five Boroughs of New York City, specifically focusing on the construction worker community.



LILLIAN GORDON-KOVEN

New York University

Lily Gordon-Koven is a Master of Urban Planning Candidate at NYU Wagner, with a Environment, Infrastructure, and Transportation specialization. She is currently a Planning Intern at the New York City Department of Transportation with the Research, Implementation, and Safety group and a Research Assistant at the Rudin Center for Transportation Policy and Management. She holds a B.A. in Geography and Urban Studies from Macalester College in Saint Paul, Minnesota. Before coming to Wagner, Lily worked as a subsidized housing case manager in Chicago. She also spent a year as a Complete Streets Fellow at the National Complete Streets Coalition with Smart Growth America. She is interested in equitable access to public transportation, pedestrian and bicycle safety and planning, community engagement, and public space.

Description of Masters -NYU Wagner's Master of Urban Planning program brings students into direct contact with the critical urban challenges of our time. Today's urban planners must balance development, community needs and social justice, provision of critical public services, sustainability and security. Housed within a school of public service, rather than a school of architecture, the Master of Urban Planning program uses the broader contexts of policy, management and finance to prepare students with the critical thinking they need to succeed in urban design, land use, economic and community development, housing, and environmental and infrastructure planning.



SANDY JOHNSTON

University at Albany, SUNY

Sandy Johnston is a student in the Master of Regional Planning program at the University at Albany, concentrating in Transportation and Planning to complete a certificate in Urban Policy as well. He arrived in Albany after living previously in Portland, OR; a small town in Iowa; New Haven, CT; Chicago; Jerusalem; and New York City, and so considers himself well-versed in different kinds of urban forms and personalities. Intending to embark on a career in public transit planning, Sandy's interests include the political economy of transit, transit-oriented development, freight rail, and affordable development; he also admits an interest in Art Deco architecture. His research project will explore the political forces behind the building of transit infrastructure, comparing Philadelphia's Center City Commuter Connection with a more recent light-rail system in the US. Sandy has previously interned at the Center for Neighborhood Technology in Chicago, and can be found blogging at www.itineranturbanist.ss.com and on Twitter @sandypsjs.



GARY JORDAN

University at Buffalo, SUNY

Gary Jordan is pursuing a Master of Science degree in Civil Engineering from SUNY-Buffalo's Civil, Structural, and Environmental Engineering Department, with an Area of Study in Transportation Systems Engineering. UB's Transportation Systems Engineering program focuses on improving the efficiency, safety, sustainability, and resiliency of surface transportation systems. This program integrates research in intelligent systems, advanced computing, hazard mitigation, simulation and econometric modeling. The goal of Gary's research is to develop new statistical models of elderly mobility patterns in order to favorably impact the livability among the aging population (e.g., better safety, lower transportation expenses, better access to medical care, and higher productivity of the elderly). Gary holds a Bachelor of Science in engineering physics from the United States Military Academy at West Point, a Master of Arts degree in economics from the University of New Hampshire, and an MBA with a concentration in finance from the University of Maine.



ETHAN WARREN

University at Binghamton, SUNY

In August 2014, Ethan started as a Master's of Regional Planning student at SUNY Albany, with a concentration in transportation. After his undergraduate program in sociology at SUNY Binghamton and an Americorps term with Mobility Management of South Central New York, Ethan decided he wanted to pursue planning as a career. He hopes to center his research project around how best to serve disadvantaged populations and promote equity through transit-oriented development.



DR. KEROP JANOYAN

Associate Professor

Department of Civil and
Environmental Engineering
Clarkson University

Email: kerop@clarkson.edu

Prof. Kerop Janoyan is a faculty member in the Civil and Environmental Engineering Department at Clarkson. He received his BS, MS, Engineer, and PhD degrees in Civil Engineering from the University of California at Los Angeles (UCLA) in 1993, 1995, 1998 and 2001, respectively. He is a Registered Professional Engineer (PE) in California. He currently serves as the Director of Distance Learning in the Office of the Provost and as the Executive Officer of the Department of Civil and Environmental Engineering where he is an Associate Professor. He has been recognized numerous times by the Coulter School of Engineering for his excellence in teaching undergraduate and graduate courses. He continues to serve on numerous university and departmental committees and recently received the Albert D. Merrill Award and was inducted into Phalanx, Clarkson University's highest honor society. He was elected By-Fellow of Churchill College at Cambridge University where he spent his sabbatical stay in 2009.

Dr. Janoyan's research and development expertise covers a broad range of related topics with a strong focus on aspects of intelligent infrastructure (including structural, geotechnical, environmental and energy) systems, in-service diagnostics, health monitoring, and parametric modeling of response from field measurements. His current research activities include (1) development and deployment of advanced wireless sensor networks for structural health monitoring of bridges, (2) characterization of in-service wind turbine towers, (3) performance of underground wireless sensor networks, (4) building energy characterization of smart housing, (5) characterization of high-strength insulated concrete block building systems, (6) development of next generation distributed green datacenters, (7) structural testing and characterization of wind turbine blades, where he is the co-Director of the Center for the Evaluation of Clean Energy Technology (CeCeT) Blade Testing Facility at Clarkson University (<http://www.clarkson.edu/btf/>). He has served as a mem-

ber of a number of technical committees and has chaired many conference sessions. Dr. Janoyan has an extensive history of participation in various academic and joint industrial projects tailored toward application of advanced sensing and diagnostics approaches for infrastructure, industrial, environmental and energy systems. Dr. Janoyan has authored or co-authored more than 90 technical papers and reports and has presented his research at numerous national and international conferences and workshops. His research and development efforts have garnered nearly \$4 million in funding and have been supported by the National Science Foundation (NSF), Federal Highway Administration (FHWA), the New York State Department of Transportation (NYSDOT), the New York State Energy Research and Development Authority (NYSERDA), the Syracuse Center of Excellence, the NYSTAR Center of Advanced Material Processing, General Motors Powertrain, John Deere, General Electric, Lockheed Martin, Cooper Crouse-Hinds, and other partners.

UTRC WOMEN'S TRANSPORTATION SEMINAR AWARD WINNER (LEONARD BRAUN MEMORIAL GRADUATE SCHOLARSHIP)



Pictured (from left): Penny Eickemeyer, Associate Director for Research, US DOT Region 2 University Transportation Research Center; WTS-GNY Scholarship Committee Chairperson Keri Cibelli; scholarship recipients Gabrielle Kempinski, Maria Kezadri, Judith Zhao, Quanquan Chen, Wei Zou; and NYCDOT Commissioner Polly Trottenberg.

The 2014 Leonard Braun Memorial Graduate Scholarships went to Wei Zou and Quanquan Chen. UTRC made a contribution to the award given to Ms. Zou. She received her Master of Science from UC Davis and Bachelor of Science from the University of Hong Kong. Ms. Zou is currently developing a comprehensive freight accident database and using rigorous statistical models to analyze freight crashes, aiming to propose strategies to prevent road accidents and minimize the potential losses brought by such tragedies. While in California, Ms. Zou has worked as an intern at the Governor's Office of Planning and Research and a consultant at the International Council of Clean Transportation. Before entering the graduate school with a full scholarship, she was working as a graduate engineer at AECOM Asia in Hong Kong and actively involved in all kinds of volunteering work. Apart from research, Ms. Zou enjoys cooking, traveling, playing the piano and ukulele. Upon graduation, Ms. Zou plans to work with other professionals to improve accessibility in rural areas, to promote the application of new technologies in urbanized cities, and to raise people's awareness of road safety, through sustainable transportation projects.

Quanquan Chen is a third year Transportation Ph.D candidate in the Civil Engineering department at the City College of New York. She obtained her Master of Science in Logistics Engineering from Southwest Jiaotong University, China and Bachelor of Science in Transportation Management from Central South University, China. During her first year of Ph.D study, Ms. Chen was responsible for a field survey of truck delivery operators in New York City to understand freight delivery patterns such as vehicle travel routes, delivery tour characteristics, travel and delivery times and vehicle load factors. Now, Ms. Chen is applying her existing fields of knowledge, such as logistics, last mile delivery and supply chains to identify effective road and curb policies for urban freight. Ms. Chen's future research will focus on specific research of understanding the costs of urban freight operations and analyzing approaches to improve last mile delivery in urban areas. Ms. Chen hopes to help residents to obtain high quality lives supported by smooth supply chains and freight systems that are friendly to livable communities.

WTS-GNY gives out this annual scholarship to a qualified young woman pursuing a graduate degree in a transportation related field. The local GNY chapter named this scholarship after Lawrence Braun as a memorial to his accomplishments in his transportation career.

SALVATORE SALAMONE, ASSISTANT PROFESSOR IN THE DEPARTMENT OF CIVIL, STRUCTURAL AND ENVIRONMENTAL ENGINEERING, HAS BEEN AWARDED THE 2014 ACHENBACH MEDAL

Salvatore Salamone, Assistant Professor in the Department of Civil, Structural and Environmental Engineering, has been awarded the 2014 Achenbach Medal. Presented by the International Workshop on Structural Health Monitoring, the award recognizes a young investigator who has made an outstanding contribution to the field of structural health monitoring. This includes the monitoring of bridges, pipelines, buildings and other infrastructure.

To be eligible for the international award, one must be a young re-

searcher within 10 years of receiving a PhD.

A native of Italy, Salamone joined UB in 2010 after earning his PhD at the University of Palermo and conducting postdoctoral research at the University of California, San Diego.

The medal is named in honor of Jan Achenbach, professor emeritus (Walter P Murphy Professor and Distinguished McCormick School Professor) at Northwestern University.

WELL-DESERVED PROMOTIONS: DR. ZHAN GUO OF NEW YORK UNIVERSITY PROMOTED TO ASSOCIATE PROFESSOR AT NYU WAGNER SCHOOL

Dr. Zhan Guo has been promoted to associate professor with tenure at NYU Wagner School.

His recent publications include:

1 - Li, F and Z Guo. 2014. Do parking standards matter? evaluating the London parking reform with a matched-pair approach. *Transportation Research Part A: Policy and Practice*, 67, 352-365

2 - Raveau S, Z Guo, J C Muñoz, N H M Wilson. 2014. A behavioral

comparison of route choice on metro networks: Time, transfers, crowding, topology and socio-demographics. *Transportation Research Part A: Policy and Practice*, 66, 185-195

Congratulations Dr. Guo.

PAST EVENTS

UTRC HOSTED A PRESENTATION ON URBAN CONNECTED MOBILITY FOLLOWED BY A PANEL DISCUSSION



From L to R: Camille Kamga, UTRC Director, Larry Yermack, Strategic Advisor at Cubic Transportation Systems; Robert E. Paaswell, UTRC Director Emeritus; Candace Brakewood, Assistant Professor at CCNY; Matthew W. Daus, UTRC Distinguished Lecturer; Richard Hanley, Professor at New York City College of Technology

Cubic Transportation Systems has developed the platforms necessary to deploy a universal transportation account, which would provide benefits to travelers as well as operators. Beyond the real operational improvements, it becomes the most powerful traffic demand management tool yet developed.

public providers as well as App developers. However, Larry believes that so far, they all fall short of solving the problem. He talked about the vision of connected urban mobility that addresses the problems and is within our grasp. His presentation enabled the audience to imagine the ability to use a phone to plan a journey, check schedules, receive real-time incident data, pay for all of the segments and then receive a single monthly bill for all paid transportation used.

Operators will have ready access to travel patterns giving them the ability to modify service. We can explore what a seamless trip would mean to the individual travel experience, the opportunities for regional cooperation and service integration that this approach has to offer.

ON THE WEB

The presentation and panel discussion were videotaped and are available on the UTRC's website.

<http://utrc2.org/events/connected-urban-mobility>

UTRC WORKSHOP WITH JAPANESE CIVIL ENGINEERING PROFESSORS

Several UTRC faculty collaborated with civil engineering professors from Japan on December 4, 2014 for a workshop related to traffic congestion and goods distribution after disasters. Jun Sakamoto from Japan's National Institute of Technology, Gifu College, who is spending the year at Queens College-CUNY, reached out to UTRC through Queens College colleagues, Mindy Rhindress, Adjunct Professor of Sociology, and Andy Beveridge, Professor of Sociology, who had previous connections with UTRC. Dr. Sakamoto and three of his colleagues in Japan were interested in presenting their research and exchanging ideas with UTRC researchers with similar interests. The topics presented during this program included:

Analysis of traffic animated simulation during downpour disasters using probe car data with GIS application, Motohiro Fujita, Ph.D., Nagoya Institute of Technology

Dr. Fujita's presentation discussed an analysis of traffic congestion after a typhoon hit in Japan on September 20, 2011 that caused severe damage to Nagoya's and Tajimi's traffic networks, including public transport, and highlighted the problem that current traffic measures to prevent traffic confusion under downpours were not yet sufficient. In this research, an animated simulation was developed by using GPS car data (probe data) on the road network with a GIS application in order to visualize and interpret heavy traffic jams that resulted. The simulation was able to demonstrate road traffic confusion under a downpour disaster and showed several weak points in the urban traffic network, enabling traffic mitigation measures against future disasters to be examined.

Planning of goods distribution in earthquake aftermath, Wisinee Wisetjindawat, Ph.D., Nagoya Institute of Technology

Dr. Wisetjindawat's research focused on issues with goods distribution after disasters by examining the situation after a 9.0 (Mw) earthquake and Tsunami occurred in Japan on March 11th, 2011, affecting a vast area of northeastern Japan. This research investigated the uncertainty of individual links in the logistics system becoming unusable and the resulting effect on the entire logistics system. The analysis indicated that consideration must be given in advance to the likelihood of the road network being disrupted at different intensity levels, the potential recovery strategy on different road classes, and the resulting impacts on logistic operations. It was recommended that this type of analysis could be



From L to R: Kyriacos Mouskos, Camille Kanga, UTRC Director, Larry Yermack, Strategic Advisor at Cubic Transportation Systems; Robert E. Paaswell, UTRC Director Emeritus; Candace Brakewood, Assistant Professor at CCNY; Matthew W. Daus, UTRC Distinguished Lecturer; Richard Hanley, Professor at New York City College of Technology

beneficial in developing preparations for coping with the unavoidable uncertainties that do arise in these circumstances.

Possibility of black-spot identification based on probe car data, Jun Sakamoto, Ph.D., National Institute of Technology, Gifu College

Using GPS sensors, this research analyzed parameters of vehicles, such as speed and position, and studied sudden braking data. This information allowed for the identification of hot spots or locations of recurring accidents. The researchers examined a 3.2km stretch of road in the Gifu Prefecture in Japan. Through various modeling techniques, the research was able to estimate traffic accidents and therefore identify black-spot locations based on analysis of sudden braking and road situations.

Another Japanese professor, Koji Noda, Ph.D. of the Toyota Technological Institute in Nagoya also participated in the workshop. In addition, a presentation was given by UTRC professor Thomas Wakeman. His topic was:

Cooperation and Collaboration of Land-based Logistics Teams to Enhance Supply Chain Resilience, Thomas Wakeman, Ph.D., Professor, Stevens Institute of Technology

This research developed guidelines using lessons learned during Hurricane Sandy to aid decision-making to reduce the impact of a flood event. Hurricane Sandy and other recent storms on the Eastern seaboard, combined with future trends of sea-level rise and storm severity, have demonstrated that reducing the impact of port flooding is an economic necessity. Though current policies and practices are successful in restoring water-side marine operations, landside operations are less successful. Therefore, this research focused on guidelines, including the establishment of a Logistics Team to propose how to help facilitate the recovery of terminals, intermodal connections, and address local flood mitigation for supply chains needing to restore normal business processes after an event. The guidelines describe possible methods of restoring normal port supply chain operations through cooperative practices. It was concluded that when ports throughout the country use the recommended collaborative principles, they work to overcome the normal competitive nature associated with the maritime industry and can assist one another during periods of distress. The conclusion was that the routine application of the guidelines would help create more resilient ports and logistic practices, further enhancing regional and national economic resilience.

UTRC AT THE 2014 NJDOT SHOWCASE

UTRC staff attended the 16th Annual NJDOT Research Showcase, held on October 23rd, 2014 at the Mercer College. This annual showcase is an opportunity for NJDOT customers to experience the broad scope of ongoing research initiatives, technology transfer activities, and academic research being conducted by university research partners and their associates.

This year's conference theme is Progress in Transportation Research Using Technology and research will be highlighted in presentations and academic displays. Continental breakfast and lunch are included in the program.

ON THE WEB

For More Information, please visit:

<http://cait.rutgers.edu/cait/16th-annual-njdot-research-showcase>



From L to R: Dr. Hani Nassif, Rutgers University; Dr. Steven I-Jy Chien, New Jersey Institute of Technology; Dr. Camille Kanga, UTRC; Edward Kondrath, NJDOT at 16th NJDOT Showcase

PAST EVENTS

INTERNATIONAL ASSOCIATION OF TRANSPORTATION REGULATORS (IATR) NEW ORLEANS 2014 CONFERENCE

The IATR welcomed government transportation regulators and vendors from around the world in New Orleans, Louisiana (NOLA) from September 21-24, 2014. A record number of conference attendees were educated on the latest in technology, accessibility and regulatory developments everywhere. After engaging in workshops and action packed sessions chock full of relevant information, our conference attendees “Let the Good Times Roll” in the “Big Easy” - with networking activities and entertainment that will be remembered forever. UTRC distinguished lecturer, Matthew W. Daus was honored to have been recognized by IATR colleagues, who unanimously re-elected him pro bono President for many years to come.

The theme of this 27th Annual Conference of the International Association of Transportation Regulators (IATR) was “A New World Order for Ground Transportation Regulation,” which was also the title of Matt’s State of the IATR speech delivered at the conference, which can be viewed in its entirety at: <https://www.youtube.com/watch?v=W2IMdmzp5Fo&list=UUnoQKZHxr4jwlwHSneJrtFQ&index=7>.

ON THE WEB

Matt has put together a recap of the conference in his column that can be accessed at:
http://www.tlc-mag.com/in_focus_nov14.html

UTRC CO-SPONSORED THE RUDIN CENTER’S TRANSPORTATION INNOVATION: SHORT TALK, BIG IDEAS SERIES

Rudin Center hosted a sixth event of the Short Talk, Big Ideas series on September 23, 2014. Speakers delivered lightning presentations about their work and ideas.

Speakers:

John Biggs, TechCrunch - “Mytro”

Arlene Ducao, MindRider - Brain wave-tracking bike helmets

Richard Dunks, NYU CUSP - Water Street Corridorscope

Malinda Foy, MTA Bridges and Tunnels

Neysa Pranger, Control Group - Beacon technology for transit

Ryan Russo, NYC DOT - Vision Zero

Paul Salama, WXY Architecture + Urban Design - Green loading zones

Jose Soegaard, Metropolitan Waterfront Alliance - Development of the NY/NJ waterfront

Moderator: Sarah Kaufman, NYU Rudin Center for Transportation

ON THE WEB

For more information, please visit:

<http://wagner.nyu.edu/rudincenter/events/>

NYMTC BROWN BAG SEMINAR – 9/11 SCHOLARSHIP RECIPIENTS’ PRESENTATIONS

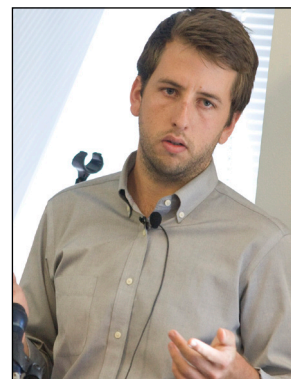
On September 18, four recipients of the 2012-13 academic year presented at the Brown Bag Seminar held at NYMTC for the September 11th Memorial Program for Regional Transportation Planning. The Program provides assistance to students and organizations for projects in both academic and public policy arenas as a way to educate and motivate those who are interested in transportation technology and planning. Penny Eickemeyer, UTRC Associate Director for Research, moderated the recipients’ presentations.

The Brown Bag seminar highlighted the work of four 2013-14 academic year participants:

- Emily Heard, Masters of Urban Planning Candidate, Columbia University
Project: Greenhouse Gas (GHG) Emission Reduction Implementation Planning
- Homer Hill, Master’s of Urban Planning candidate, Hunter College, CUNY
Project: Taxi Travel Estimation and Calibration Modeling Tool (TTEC MT)



Emily Heard, Columbia University



Homer Hill, Hunter College, CUNY

NEW MEMEBERS TO CCNY FACULTY



Dr. Candace Brakebook

Dr. Candace Brakewood is an Assistant Professor in the Department of Civil Engineering at the City College of New York. Her interests include public transportation, transportation planning, and intelligent transportation systems. Her research focuses on understanding how new information and communication technologies can be used to improve public transportation systems. Recently, she has conducted studies to evaluate the impacts of real-time information on transit ridership, and she has worked in the area of new fare payment systems. For more information on Dr. Brakewood's research, please visit her website: candace-brakewood.com

Prior to working in the transportation field, Candace was a Patent Examiner at the United States Patent and Trademark Office in Alexandria, Virginia. She has a PhD in Civil Engineering from Georgia Institute of Technology, dual Master of Science degrees in Transportation and Technology Policy from Massachusetts Institute of Technology, and a Bachelor of Science in Mechanical Engineering from Johns Hopkins University.



Dr. Mahdiah Allahviranloo

Mahdiah Allahviranloo is an Assistant Professor at the Department of Civil Engineering, The City College of New York. Her research interests are travel demand and behavior, learning and mining travel patterns, urban operations research, network modeling, and Bayesian econometrics. She is currently working on mining and clustering activity pattern trajectories, data visualization and network modeling under extreme modeling.

Education:

University of California, Irvine, USA, PhD, Civil Engineering
Iran University of Science and Technology, Tehran, Iran, M.S
Sharif University of Technology, Tehran, Iran, B.S.

Announcement Post-Doctoral Research Position Transportation Engineering at UTRC

A Post-Doctoral Research position is available at Region-2 University Transportation Research Center. The Region-2 University Transportation Research Center (UTRC-II) is one of ten original University Transportation Centers established in 1987 by the U.S. Congress. These Centers were established with the recognition that transportation plays a key role in the nation's economy and the quality of life of its citizens. Further information is available at: www.utrc2.org

The Research Associate position requires a highly motivated and dynamic researcher with a completed PhD in civil/transportation engineering or a related field. The successful candidate should conduct externally funded research focusing on transportation, prepare grant proposals, and write reports and scholarly articles to be submitted to clients and scholarly journals. The position requires having a prior research experience in transportation engineering, an excellent publication record, and experience in writing grant proposals.

The ideal candidate should have strong research and analytical skills in a scientific or technical field, and enjoy solving challenging technical problems in a collaborative and entrepreneurial environment. He/She should also have excellent programming skills (languages such as Python, LabVIEW or Java), in GIS, knowledge in transportation engineering software packages such as HCS, VISSIM, VISSUM, TRANSCAD, PARAMICS, CUBE.

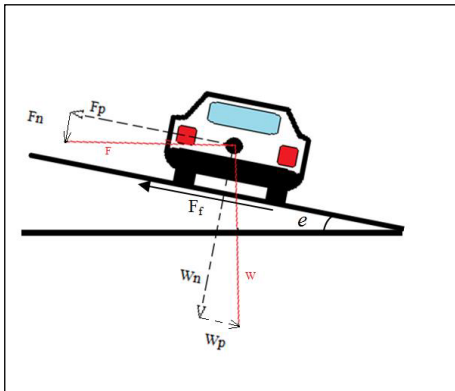
To apply, please visit: https://www.rfcuny.org/hr/pvn/cgi-bin/show_job.asp?pvn=REA-1780

COMPLETED PROJECTS

SPEED AND DESIGN CONSISTENCY OF COMBINED HORIZONTAL AND VERTICAL ALIGNMENTS IN TWO-LANE RURAL ROADS

PI: Dr. Ivette Cruzado Vélez
Institution: University of Puerto Rico - Mayagüez
Sponsor: UTRC

One of the most important equations in highway design is the formula for the minimum radius of horizontal curve which considers the design speed of the highway, the superelevation, and the side friction factor. Traditionally, differences in the highway vertical alignment features, which are prevalent at areas with rolling and mountainous terrains, are not considered in this part of the design process. Past research has indicated that drivers perceive horizontal curves differently when compared with highway sections in which both horizontal and vertical curves overlap. To address this issue, speed data from over 20,000 vehicles were collected at 41 horizontal curves on ten rural two-lane highway segments in Puerto Rico. Preliminary analyses identified that speed patterns vary across several categories of terrain type, curves. The results of the model identified the terrain type as the variable that explains the most variability in operational speeds.



ON THE WEB

The full report is available for a free download at the UTRC website:
<http://utrc2.org/research/projects/speed-and-design-consistency>

LANDFILL CLOSURE WITH DREDGED MATERIALS - DESKTOP ANALYSIS

PIs: Dr. Robert Miskewitz & Dr. Christopher G. Uchirin
Institution: Rutgers University
Sponsor(s): NJDOT & UTRC

This report analyzes the potential for closure of New Jersey landfills using dredge material from existing Confined Disposal Facilities (CDF). The project included an update of the existing New Jersey Department of Environmental Protection (NJDEP) landfill database, the development of a rating system to identify sites with the highest potential to utilize dredged material for their closure, and the identification and preliminary investigation of the top five candidate landfills based on this rating system. Due to information developed during the project it was determined that all but four of the landfills assessed or closure were considered unsuitable for closure as a result only four landfills were selected and investigate further. The results of this project can be used by the NJDOT to facilitate the efficient closure of selected landfills, the beneficial reuse of the materials in CDFs, and the continued use of the state's CDFs and dredging activities.



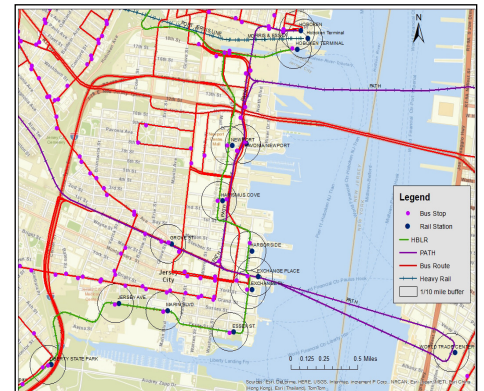
ON THE WEB

The full report is available for a free download at the UTRC website:
<http://utrc2.org/research/projects/landfill-closure-dredged-materials>

PROMOTING TRANSPORTATION FLEXIBILITY IN EXTREME EVENTS THROUGH MULTI-MODAL CONNECTIVITY

PI: Dr. Rae Zimmerman
Institution: New York University
Sponsor: UTRC

Extreme events of all kinds are increasing in number, severity, or impacts. Transportation provides a vital support service for people in such circumstances in the short-term for evacuation and providing supplies where evacuation is not undertaken, yet, transportation services are often disabled in disasters. Nationwide and in NY & NJ record-setting weather disasters have occurred and are expected to continue. Network theories provide insights into vulnerability and directions for adaptation by defining interconnections, such as multi-modality. Multi-modal connectivity provides passenger flexibility and reduces risks in extreme events, and these benefits are evaluated in the NY area. This report provides statistical summaries, cases, and a literature review to characterize multi-modal facilities and their use in extreme events. Recommendations and future research directions are provided for the role of passenger multi-modality to enhance transit flexibility.



ON THE WEB

The full report is available for a free download at the UTRC website:
<http://utrc2.org/research/projects/promoting-transportation-flexibility-extreme-events-through-multi-modal>

FULL-SCALE INVESTIGATION OF WIND-INDUCED VIBRATIONS OF MAST-ARM TRAFFIC SIGNAL STRUCTURES

Principal Investigator: Michael O'Rourke
and Chris Letchford

Institution: RPI

Sponsor: NYSDOT & UTRC

Because of their inherent flexibility and low damping ratios, cantilevered mast-arm traffic signal structures are susceptible to wind-induced vibrations. These vibrations cause structural stresses and strains to develop in a cyclical fashion which can lead to reduced service life due to fatigue and, in extreme cases, full collapse. In 2001, after the collapse of several of these structures throughout the United States, AASHTO code standards were updated to include fatigue provisions for traffic signal supporting structures. In NYS, there is particular concern regarding structures spanning longer than 14 meters which currently do not meet these updated fatigue provisions. Results from this full-scale experiment indicate that the surrounding terrain conditions, which affect the turbulence intensity of the wind, greatly influence the likelihood of occurrence of longlasting, high-amplitude vibrations and also impact whether reduced service life due to fatigue is likely to be a concern.



ON THE WEB

The full report is available for a free download at the UTRC website:
<http://utrc2.org/research/projects/wind-induced-vibrations-mast-arm-traffic-signal>

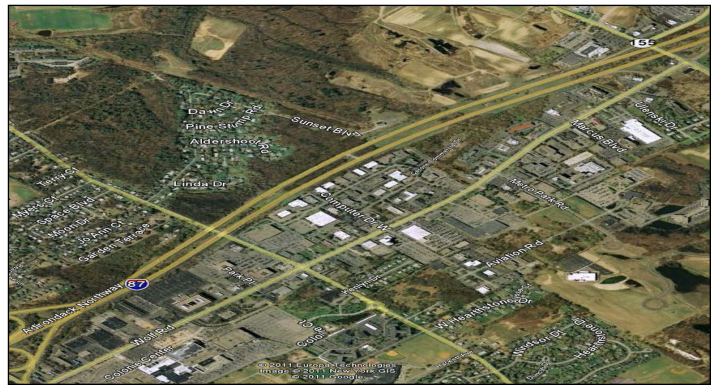
ADAPTIVE TRAFFIC SIGNAL CONTROL SYSTEM (ACS LITE) FOR WOLF ROAD, ALBANY, NEW YORK

PIs: Dr. Xuegang (Jeff) Ban, Dr. Camille Kamga, and
Dr. Xiaokun (Cara) Wang

Institution: RPI, CUNY

Sponsor(s): NYSDOT & UTRC

Adaptive Control Software Lite (ACS-Lite) is a traffic signal timing optimization system that dynamically adjusts traffic signal timings to meet current traffic demands. The purpose of this research project was to deploy and evaluate the ACS-Lite adaptive traffic control system on a congested urban corridor in New York State (NYS). In this case, the Wolf Road Corridor in Albany, New York, was chosen. The primary goal was to document the experiences and key lessons learned from the deployment and evaluation regarding how an adaptive control system can be deployed, the advantages and disadvantages of the system, and whether it is suitable for use in other corridors in NYS. The results of the project showed that for heavily congested corridors adaptive control can improve flow within its own system, but may cause extra delays at the boundaries where there are interactions with other traffic control systems.



ON THE WEB

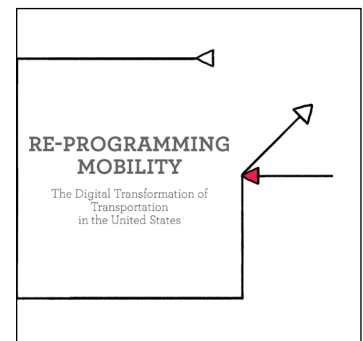
The full report is available for a free download at the UTRC website:
<http://utrc2.org/research/projects/adaptive-traffic-signal-control-system>

Re-Programming Mobility – A report by Dr. Anthony Townsend from Rudin Center for Transportation Policy & Management

Dr. Anthony Townsend, a Senior Research Scientist at Rudin Center for Transportation Policy & Management released a report on Re-Programming Mobility, an evaluation of the future of American transportation in 2030. The report, sponsored by the Rockefeller Foundation, has already received high accolades. To access the full report, please visit:
<http://reprogrammingmobility.org/wp-content/uploads/2014/09/Re-Programming-Mobility-Report.pdf>

The NYU Rudin Center was cited widely in the media about several topics:

- Re-Programming Mobility: <http://www.citylab.com/commute/2014/09/the-four-transportation-systems-youll-meet-in-the-future/380904/>
- East Side Access: <http://www.newsday.com/long-island/mta-32b-would-fund-new-trains-east-side-access-lirr-double-track-1.9389792>
- Port Authority leadership: http://www.nj.com/politics/index.ssf/2014/09/key_lawmaker_proposes_elected_port.html
- Gondolas in NYC: <http://www.wired.com/2014/09/gondolas-brooklyn/> and <http://www.myfoxny.com/clip/10589952/gondolas-over-nyc>



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