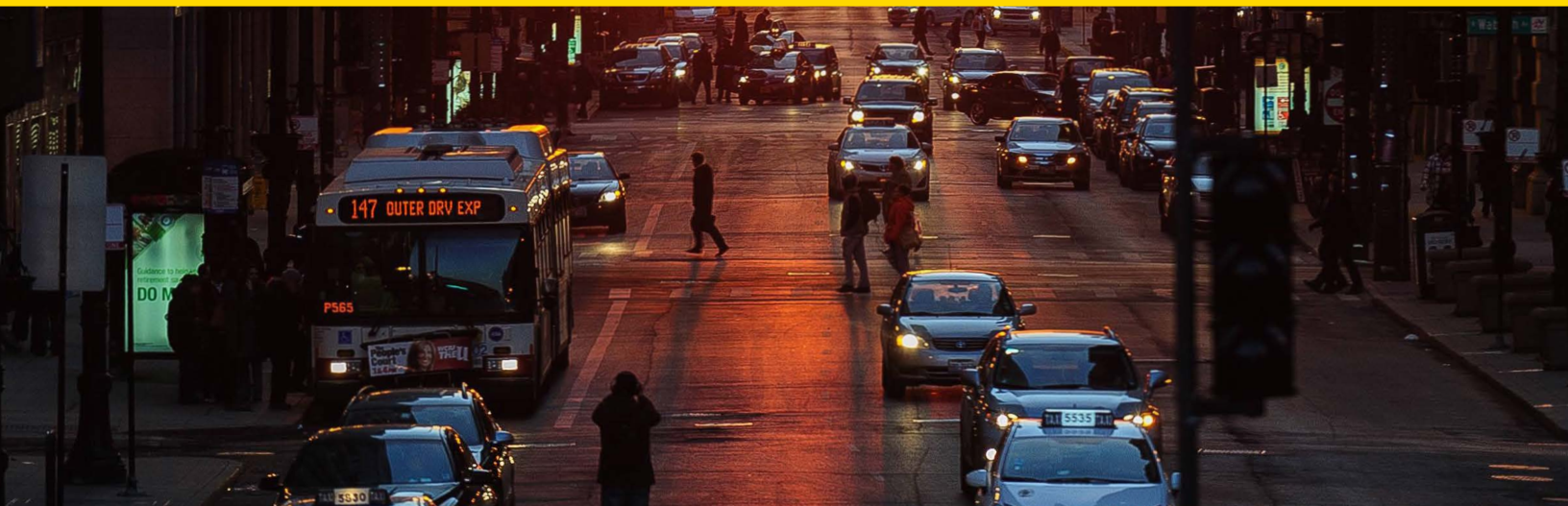


RESEARCH NEWS

SUMMER 2018



UNIVERSITY TRANSPORTATION RESEARCH CENTER



In This Issue



HIGHLIGHTS



FACULTY PROFILE



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UPCOMING EVENTS



RESEARCH



CONSORTIUM NEWS

Notes from UTRC's Director Emeritus

Where is planning going?

I have been giving a number of presentations on the difficulties facing the MTA in modernizing. A legacy system (a rail system started early in the 20th Century), the MTA is bound by geography, its fixed assets (tracks and stations), its impact on NYC development and an organizational structure based on late 20th C. management practices. Yet, we know the following.

- The Year 2000 was a breakout year for the application of digital technology and utilization of “big” data.
- Over the last few years the newest “disruptive technology”, TNCs, have come into strong existence and claimed their seat at the transportation table.
- In addition, the age of autonomous vehicles – with all that implies – is rapidly upon us.
- Finally, transit and development in the 5 boroughs are totally in lock step – neither can exist without the other.

Taken as a piece, these new forces make us pause in how we are to address transportation planning and capital planning. Transportation planning of the 20th Century, shaped and crafted by Federal Regulations, was needed to justify the building of roads and transit systems. Planning was the necessary (but not always sufficient) step towards getting funds. But now we know we can collect data – real time – on all aspects of people and goods movement, as well as on all aspects related to the supply of transit. This information is available to all – transportation providers,



Dr. Robert E. Paaswell

their customers as well as developers, realtors, shop keepers and others. We have the ability (as the TNC providers know so well) to adjust supply to demand dynamically. And that is how we must think about planning and especially capital planning. The MTA has long standing 5 year plans based on how the system has always looked and how it can carry into the future. But shouldn't it now revisit how it must look in the future based on new customer choices and the new culture of smart devices? How many buses must they replace if TNC companies become even stronger and how much new rail do they need if autonomous vehicles gain control of the highways? Abstract, but these are coming. Planners must now evaluate difficult scenarios, assessing cultural changes, customer behavior and, of course city development patterns.

Tough exercises, but very necessary.

Robert Paaswell
UTRC Director Emeritus

IN THE NEWS

Matthew W. Daus
Distinguished Lecturer &
Transportation Technology
Chair, UTRC/CCNY



(Matt Daus Interview in Crain's NY Business)
[NYC Medallion Auction Mystery Bidder: Is Marblegate the New Taxi King?](#)

Matt Daus Proposes Holistic Transportation Plan
[NYC Taxi Suicides and Traffic Hell](#) (Bloomberg News) -

Matt Daus interview on CUNY-TV
[NYC Commuter Vans – The Origins of Shared Mobility](#)

NYMTC event features Matt Daus and other industry leaders
[Big Data, Autonomous Mobility & The Law](#) (Black Car News)



HIGHLIGHTS

PROJECT UPDATE:

NYCDOT CONNECTED VEHICLE PILOT

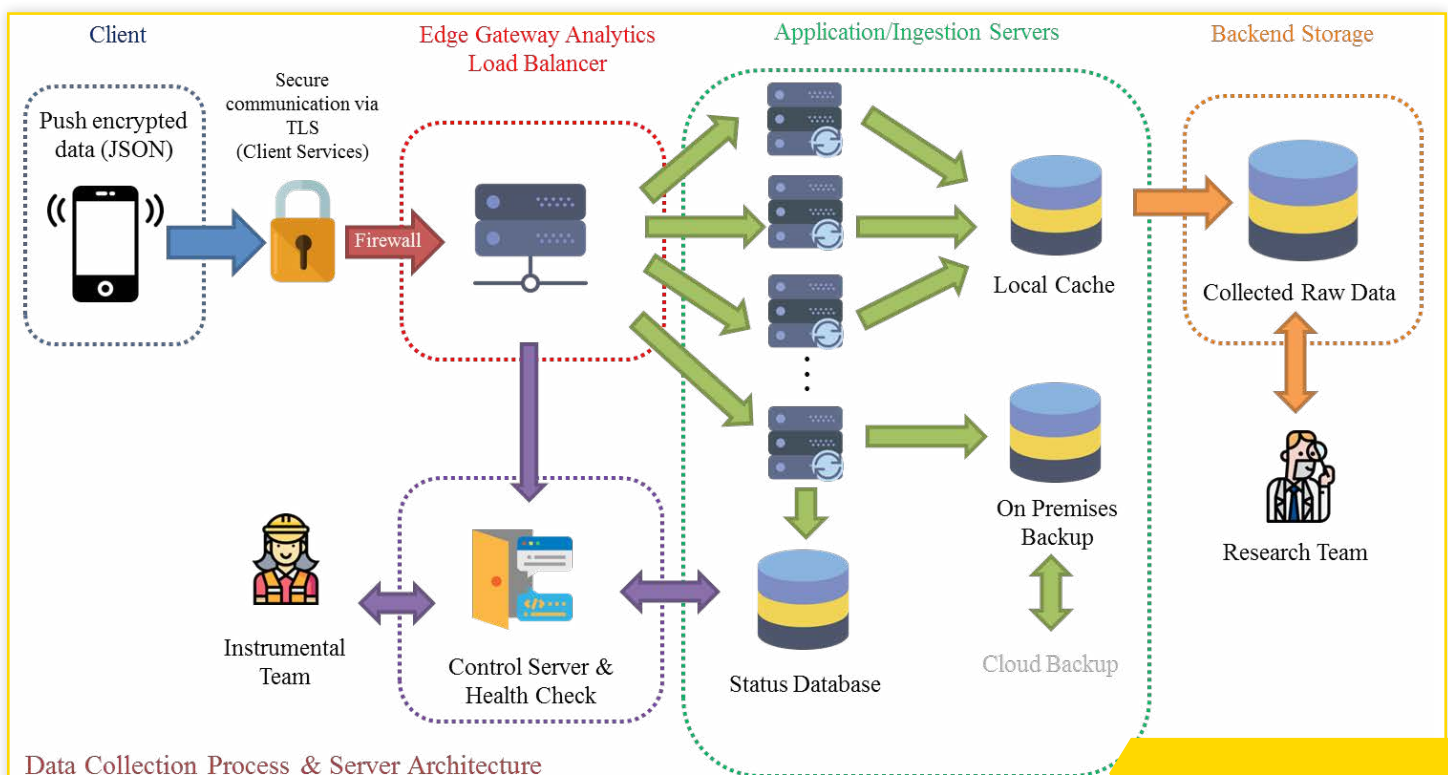


UTRC continues its involvement in NYCDOT's Connected Vehicle (CV) Pilot Deployment, the USDOT-sponsored project focusing on the safety benefits of CV technology in a dense urban transportation network. Researchers and staff at CCNY and NYU are currently involved in various aspects of this project. UTRC staff at CCNY is putting together training videos for the installation of aftermarket safety devices (ASD) in vehicles, which enable vehicles to communicate with each other and with road-side units (RSU). NYU researchers are developing the server architecture for data collection and storage for the Mobile Accessible Pedestrian Signal System (PED-SIG) Application which will allow visually impaired pedestrians to safely negotiate signalized intersections.

ASDs will be installed in up to 8,000 vehicles including taxicabs, MTA buses, NYC Department of Sanitation (DSNY) vehicles, and NYCDOT-owned vehicles. The installation training videos will show how to install, mount, and integrate ASDs in the three types of vehicles that will take part in the pilot study – light vehicles, trucks, and buses. Since the devices will be provided by two vendors, a total of six videos are being filmed at the NYCDOT facilities in Long Island City.



The PED-SIG Application will be installed in pedestrian information devices (PID) in the form of “smartphones” for about 100 visually impaired pedestrians. These devices will receive signal, phasing, and timing (SPaT) information from the traffic signal controller and map data messages (MAP) from NYCDOT Traffic Management Center (TMC) to assist the pedestrians in determining the signal status and intersection geometry and identifying the street orientation for safely crossing the street. Both the SPaT and MAP data will be sent to PIDs through the Amazon Web Services (AWS) cloud. In order to evaluate the performance of this application, the data will be encrypted and stored in the PIDs and pushed to NYU's secure server as shown in the diagram below.



Source: NYU, C2SMART PID SERVER ARCHITECTURE, Version 1.3

For more information about the project and connected vehicle technology, visit <http://www.cvp.nyc>.



PROJECT UPDATE:

COORDINATED INTELLIGENT TRANSPORTATION SYSTEMS DEPLOYMENT IN NEW YORK CITY (CIDNY)

CIDNY is a three-year program to promote urban Intelligent Transportation Systems (ITS) in the New York City region. The funding, provided by FHWA, enables ongoing training and research and development programs. The program areas under CIDNY include construction management, traffic demand management, dynamic data collection, traffic incident management, traffic signal timing and detection technologies, strategic ITS deployment planning, pedestrian and cyclist safety, developing data storage and the access platform for MTA Bus Time data, and transportation modeling. The project has been funded by FHWA, through its New York Division/New York City Metropolitan office. The NYCDOT and NYSDOT-Region 11 Planning is working with FHWA on this program.

Research for Year 1 began in 2015 and was completed in 2016. These projects included:

- Task 2 -Develop a Multi-Agency/Multi-Modal Construction Management Tool to Enhance Coordination of Construction Projects
- Task 5 -Develop a Comprehensive Guide to Traffic Signal Timing, New Detection Technologies and Advanced Signal Timing Concepts Applicable in New York City Strategic Intelligent Transportation Systems (ITS)
- Task 7 -Deployment Plan for New York City Research on Pedestrians and Cyclists Safety using ITS Technology in New York City
- Task 8-Develop Data Storage and Access Platform for MTA Bus Time Data

Two of the above projects, Tasks 2 and 7 have been extended into Year 2 for additional research and analysis.

Task 2

Work during Year 1 included conducting an assessment of the Construction Impact Analysis (CIA) and Work Zone Impact and Strategy Estimator (WISE) tools. This involved determining the feasibility of their customization with respect to New York City Department of Transportation's (NYCDOT) and New York State Department of Transportation's (NYSDOT) needs and requirements, cost of adoption and modification, and related issues.

Year 2 work began in February 2018. The subtasks during this year include:

- Conduct a complete analysis of historical work zones to describe the actual work zone data for NYSDOT Region 11
- Create real-world case studies for limited access roadways (interstates and select parkways). These will include historical data on pre-planned construction work zones, pre-planned short-term work zones for maintenance, and work zones for emergency repairs
- Develop a complete and detailed work flow and software implementation framework for a construction / work zone management tool that primarily focuses on the needs of Region 11. The research team, NYSDOT, and the project manager will decide on the focus and priorities of the software tool to be implemented as a demonstration app.
- Develop a conceptual prototype that reflects the work flow, proposed framework, and required databases for the tool
- Develop a first version of the proposed software tool for the selected option

The research team for the above project includes PI Kaan Ozbay, Ph.D, of the NYU Tandon School of Engineering, Abdullah Kurkcu, senior researcher, Zilin Bian, graduate student, and a software engineer. The CCNY team includes Co-PI Camille Kamga, Ph.D., Rodrigue Tchamna (post-doc) and Sandeep Mudigonda (post-doc).

Task 7

The purpose of this research is to test various countermeasures that were identified in the first year of CID-NY Task 7 that will bring NYCDOT closer to reaching the goals laid out in its 2016 ITS Strategic Plan.

Countermeasures will be tested in Year 2 that help blind and visually-impaired pedestrians understand where they are and assist them to safely get to their desired destinations. The challenges that blind and visually-impaired pedestrians contend with when approaching an intersection to cross are:

- Locating the crosswalk
- Aligning themselves in the correct direction for entering the crosswalk
- Knowing the types of lanes that will be crossed (bike lanes, number of moving lanes, medians)
- Maintaining their path while staying inside the crosswalk until they reach their destination
- Knowing when to begin crossing.

The outcome of this research will include documentation of the results from the pilot tests and development of recommendations considered most useful in New York City. For those countermeasures that are shown to have a positive impact on safety and mobility, the report will provide recommendations for when and where each countermeasure would most likely have the greatest benefit, and the requirements for their planning, implementation and maintenance.

The research team for this task includes PI Elena Prassas, Ph.D. and Gerald Soffian, PE of the NYU Tandon School of Engineering.

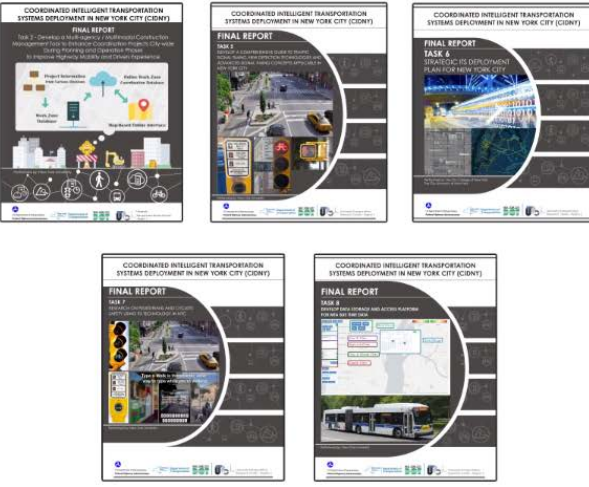
The video briefings on all previously completed CIDNY Tasks are available on UTRC's Vimeo Channel.

<https://vimeo.com/utrcregion2>

COORDINATED INTELLIGENT TRANSPORTATION SYSTEMS DEPLOYMENT IN NEW YORK CITY (CIDNY)

Project Overview

NYCDOT Project Mangers:
Ernest Athanailos, P.E.
Director, Signals & ITS Engineering
New York City Department of Transportation
(NYCDOT)
James Celentano, P.E.
New York City Department of Transportation
(NYCDOT)





FACULTY PROFILE

Dr. Anirban De

Professor & Department Chairman of
Civil and Environmental Engineering
Manhattan College, New York City



FACULTY PROFILE

Anirban De, PhD, PE, currently serves as a professor and department chairman of Civil and Environmental Engineering at Manhattan College, New York City. He received his BCE degree with honors from Jadavpur University in Calcutta, India, his MS degree from Illinois Institute of Technology, Chicago, and his PhD degree from Rensselaer Polytechnic Institute in Troy, New York. He is a registered professional engineer (PE), currently licensed in California and New York.

Following his doctoral studies, Dr. De started his career at the northern California office of Geosyntec Consultants, which is a major geotechnical consulting firm. His responsibilities included site investigation, engineering analyses and design, and construction monitoring of geotechnical facilities, including hazardous waste landfills. He worked on projects with major technical challenges and some of these consulting projects have resulted in publications, including journal articles.

Dr. De joined Manhattan College in 2002, where his primary responsibilities are teaching and research at the undergraduate and postgraduate levels. He teaches courses covering a wide range of topics in geotechnical engineering, including site characterization and geo-environmental engineering.

His current research interests include the study of large deformations in soils (such as due to penetrations and explosions) through a combination of physical and numerical modeling. The research has special application in areas of infrastructure protection, installation of offshore deep foundation, as well as other areas. He has served as a principal or co-principal investigator on several major grants from the National Science Foundation (NSF) focused on geotechnical engineering topics as well as on undergraduate engineering education.

In a recently completed project, sponsored by the National Science Foundation (NSF), Dr. De and his students studied the effects of surface blasts on underground structures and evaluated various methods to mitigate such damage. Both numerical analyses and physical model tests, using a geotechnical centrifuge, were part of this study. In a prior study, also sponsored by the NSF, he was able to measure strains induced on a model underground tunnel or a pipeline due to blasts at the ground surface, using geotechnical centrifuge modeling techniques. The results of this work can be used to retrofit existing tunnels, as well as to design safer tunnels in the future.

Dr. De was part of another recently-concluded study (also funded by the NSF) in which he and his colleagues characterized the effects of an earthquake on layered soil below ground surface, using instruments embedded in the ground. The study included field experiments, centrifuge model studies, and numerical model analyses.

Dr. De is currently serving as a co-PI on an engineering education project, sponsored by the NSF, which is focused on increasing the success in undergraduate engineering programs by academically talented students, who have documented financial needs, through involvement in various curricular, co-curricular, and extra-curricular activities.

Dr. De has published extensively in his field of expertise, including two books (one authored and another co-edited), as well as numerous peer-reviewed journal articles and conference papers. He serves actively on several boards and committees.

Visit Dr. Anirban De's Webpage at: <https://manhattan.edu/campus-directory/anirban.de>

PAST EVENTS



Steps & Strides Towards A Sustainable Future

This Earth Day (April 22nd), New York City had its third Car Free Day. UTRC hosted an academic forum on April 16, 2018 at NYIT to highlight the different ways the city can use its streets.

Dr. Camille Kamga, Director UTRC/Professor CCNY/CUNY delivered the welcoming remarks. Honorable Ydanis Rodriguez, NYC Council Transportation Committee Chair, delivered the opening keynote speech.

The half day event was organized around two panels:

Panel 1: Policy Frameworks for Car Free Cities

Moderator – Matthew W. Daus, Esq.,
Distinguished Lecturer, UTRC/CCNY/CUNY,

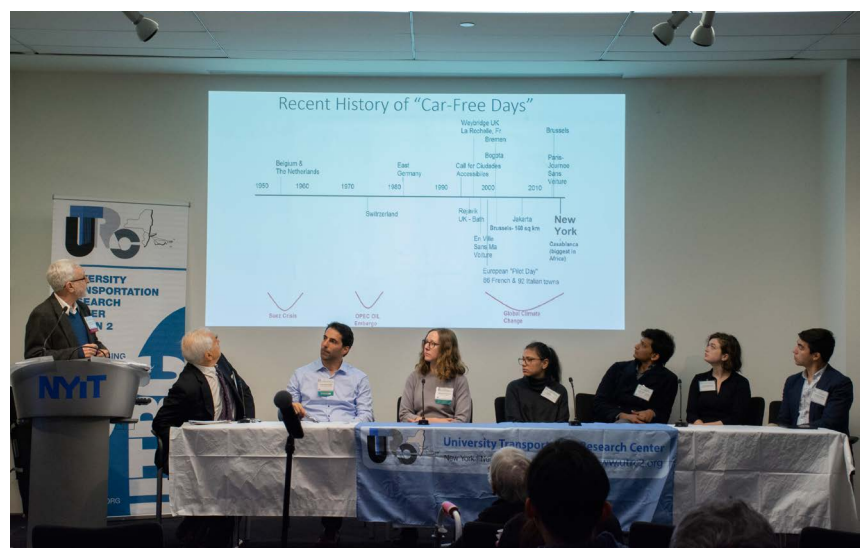
- Michael Replogle, NYC Department of Transportation, Deputy Commissioner for Policy
- Adriana Espinoza, NY League of Conservation Voters,
- Andrew Bata, UITP – International Association of Public Transport, North America Regional Manager
- Michael Kodransky, Institute for Transportation & Policy Development

Panel 2: Evaluating the Impact of a Car free Zone: Methods and Instruments

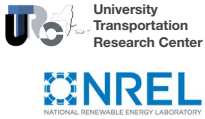
Moderator – Dr. Richard Wener, Professor,
NYU Tandon School of Engineering

- John Falcocchio, Professor, Tandon School of Engineering, NYU
- Jennifer Gardiner, Urban Planner, Program Manager, Gehl Institute, NY
- John Katircioglu, Service Solutions Manager, Urban Insights Associates
- Sagari Datta & Rupal Mehta, Sustainable Urban Environments, Tandon School of Engineering, NYU
- William Bierds, Shayan Abdul Karim Khan, Civil and Urban Engineering, Tandon School of Engineering, NYU

Dr. Nada Anid, Vice President for Strategic Communications and External Affairs New York Institute of Technology delivered the closing remarks.



PAST EVENTS

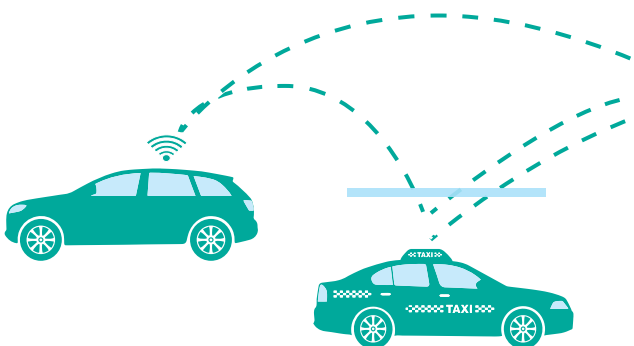


REINVENTING MOBILITY IN NEW YORK STATE

Exploring the Long-Term Impacts of Shared, Connected, Automated and E-Mobility Systems Transformations

University Transportation Research Center and National Renewable Energy Laboratory organized a workshop on May 11, 2018 at NYIT, supported by a grant from New York State Energy Research & Development Authority (NYSERDA) and New York State Department of Transportation (NYSDOT). The workshop aimed to inform future mobility systems design and reinvention, integrated data modeling, and applied research on the associated impacts to help shape a better future for New York.

This workshop explored the key data, models, scenarios and strategies that will enable potential synergies between the increased enabling of connectivity, automation, and efficient and affordable vehicle and ride sharing. It brought together transportation experts and leaders to help design and reinvent mobility in a rapidly evolving technological and service ecosystem. The roundtable was highly interactive and engaging, reflecting the need for data and an adaptive and evolving approach to maximize efficient systems and services with transformational public benefits. The workshop was the first step towards the goal of generating new and enhanced datasets, visualization and modeling approaches that can encourage technologies in the public interest, while not prematurely stifling promising innovations. A series of short research papers are planned to be provided about the roundtable and then a report—with contributions from participants.



UTRC's Transportation Technology Chair Presented at the NYMTC's Regional Trends Series: Big Data, Autonomous Mobility and the Law

Matthew W. Daus, Esq., presented at the New York Metropolitan Transportation Council's Regional Trend Series on the topic; "Big Data, Autonomous Mobility and the Law". The event took place on March 27, 2018 at NYMTC's office. Mr. Daus presented his overview on the future of transportation technology, as it relates to big data, autonomous mobility and the law.

Matt is a transportation technology lawyer, Distinguished Lecturer at the City College of New York and the transportation technology Chair at the University Transportation Research Center (UTRC). He is also the President of the International Association of Transportation Regulators. During his presentation, he discussed the evolving laws and regulations impacting transportation data and privacy, including access to data (transportation network companies, taxis, paratransit, airports) by the public, government, academia and competing private company interests.

Mr. Daus addressed the legal and policy issues being researched internationally, and led an interactive discussion on the future of the for-hire ground transportation industry as autonomous and connected vehicle technology progresses daily.

Click here to download the presentation: [Big Data, Autonomous Mobility & The Law](#)

Click here to view the meeting: [NYMTC's YouTube page](#).

Additional photos are available on [NYMTC's Flickr Page](#).

Photos Courtesy: John Lopez, NYMTC



(Left) Matthew W. Daus; UTRC's Transportation Technology Chair with NYMTC's Executive Director, Jose M. Rivera (Right)

NYMTC's Peer Exchange On Transportation Performance Management Requirements

University Transportation Research Center (UTRC) coordinated with the New York Metropolitan Transportation Council (NYMTC) to host a peer exchange workshop on requirements of transportation performance management (TPM). The workshop was held on May 16, 2018 at NYMTC's office. The primary purpose of this workshop was to bring together MPOs from around the nation to discuss how various agencies are planning to meet the recent regulation on TPM (Metropolitan Planning Regulations (23 CFR 450) passed by the federal government to be active after May 27, 2018. Six MPOs (including NYMTC) participated in the workshop, namely, Atlanta Regional Commission (ARC), Capital District Transportation Committee (CDTC), Delaware Valley Regional Planning Commission (DVRPC), Maricopa Association of Governments (MAG), and North Jersey Transportation Planning Authority (NJTPA).

UTRC's Director, Dr. Camile Kamga and Jan Khan from NYMTC facilitated the meeting. NYMTC's Executive Director, Jose M. Rivera, along with members of NYMTC's Program, Finance, and Administration Committee (PFAC) participated in a lively discussion regarding Metropolitan Planning Regulations TPM Requirements after May 27, 2018, Overview and Progress, and discussion of fulfilling the requirements for CMAQ Performance Plan, Long Range Plan Systems Performance Report, and Documentation of Changes to the Transportation Improvement Program.

During the meeting, Dr. Catherine Lawson (Director) and Alex Muro (Lead Developer) from the Albany Visualization And Informatics Lab (AVAIL) delivered a presentation on their modern, web-based and extensible visualization platform; AVAIL which seeks to explore the interaction of current planning and research procedures through the use of visual analytics and informatics.

A full report on this Peer Exchange meeting will soon be available on NYMTC's website.

Photos Courtesy: John Lopez, NYMTC



Dr. Camile Kamga, UTRC



Jan Khan, NYMTC



From L to R: Doug Hooker, Atlanta Regional Commission; Jose M. Rivera, NYMTC; Zenobia Fields, North Jersey Transportation Planning Authority; and John Ward, Delaware Valley Regional Planning Commission



Alex Muro, AVAIL, SUNY Albany



UPCOMING EVENTS

31st ANNUAL CONFERENCE INTERNATIONAL ASSOCIATION OF TRANSPORTATION REGULATORS



PHILADELPHIA, PA
September 14-17th, 2018
“Philadelphia Regulatory Freedom!”

[REGISTRATION](#)

[CONFERENCE WEBSITE](#)

Get Ready for Philadelphia at IATR's 31st Annual Conference: Message and Conference Preview by IATR President Matthew W. Daus, Esq.

In the city where the United States Constitution was written, and the Declaration of Independence was signed, Philadelphia is a special place to hold our conference, especially one that deals directly with transportation equity, effective regulation and accessibility for all. We are at a critical juncture in the field of ground transportation regulation, where major multi-modal changes are taking place involving innovative technologies, business models, new mobility options and approaches. Like when the U.S.' founding fathers convened in Philadelphia, to initiate a long-lasting experiment in Democracy at a critical time over 200 years ago, it is very appropriate for government transportation officials to think outside the box, contemplate and prepare for future scenarios that are rapidly approaching. As such, this year's theme for the **International Association of Transportation Regulators (IATR's) 31st annual conference is "Regulatory Freedom!"**

The aim of this important conference, as we enter our next 30+ years as an organization, is to train new regulators to prepare for the future, explore new approaches to public-private partnerships and working with other modes, government agencies and private businesses and organizations that may not have been on regulators' radar screens, and to better understand the big picture of this quickly evolving mobility landscape. While major changes are expected for the long-term future of transportation, just like the U.S. Constitution endeavors to protect those who are our most vulnerable citizens, this conference is focusing on ensuring how transportation officials can achieve, promote and secure transportation equity to service underserved areas, promote a fair working environment for drivers, provide service to people with disabilities, and ensure safety for all in regulating new transportation technologies. The IATR's constitution will be figuratively re-written at our conference, as we move forward in a different direction, by declaring our independence from the old paradigm and way of thinking, and to embrace new ideas and synergies.

Our conference will be held on **September 14th to the 17th, 2018 at the Logan Hotel in Philadelphia, PA**. The full preliminary program, registration and hotel accommodation information can be accessed by clicking here, along with our sponsorship menu at this link. Other information can be accessed on our website, **www.iatr.global**.



Completed Research Projects

USING VISUAL INFORMATION TO DETERMINE THE SUBJECTIVE VALUATION OF PUBLIC SPACE FOR TRANSPORTATION: APPLICATION TO SUBWAY CROWDING COSTS IN NYC

Principal Investigator(s): Dr. Ricardo Daziano, Dr. Linda Nozick

Institution(s): Cornell University

Sponsor(s): University Transportation Research Center (UTRC)

The objective of this project is to explore the role of visual information in determining the users' subjective valuation of multidimensional trip attributes that are relevant in decision-making, but are neglected in standard travel demand models. More specifically, this project aims at analyzing overcrowding perceptions in discrete choice experiments, with the use of visualization of passenger density in subway cars. Data will be collected in New York City, but a pre-test with a small sample size will be performed with international collaborators in the subway system of Santiago, Chile.

Access the full report at:

<http://www.utrc2.org/sites/default/files/Final-Report-Using-Visual-Information-to-Determine-Subjective-Valuation.pdf>

DEVELOPMENT AND EVALUATION SMART BUS SYSTEM

Principal Investigator(s): Dr. Joyoung Lee

Institution(s): New Jersey Institute of Technology (NJIT)

Sponsor(s): University Transportation Research Center (UTRC)

Due to stochastic traffic conditions and fluctuated demand, transit passengers often suffer from unreliable services. Especially for buses, keeping on-time schedules is challenging as they share the right of way with non-transit traffic. With the advance of real-time interaction between passengers and operators, bus transit can be operated in a more flexible way, thereby resulting in an energy-efficient, eco-friendly, and cost-effective urban transportation mode. To improve transit system reliability under a wirelessly connected environment, this study proposes a smart bus system (SBS) enabled by two-way communication.

Access the full report at:

<http://www.utrc2.org/sites/default/files/Final-Report-Development-and-Evaluation-Smart-Bus-System.pdf>

URBAN TRAVEL TIME VARIABILITY IN NEW YORK CITY: A SPATIO-TEMPORAL ANALYSIS WITHIN CONGESTION PRICING CONTEXT

Principal Investigator(s): Dr. Anil Yazici

Institution(s): State University of New York (SUNY)

Sponsor(s): University Transportation Research Center (UTRC)

Traffic congestion is an important aspect of quality of life, mobility and accessibility in urban areas. The economic cost of congestion is in the order of billions of dollars especially for dense urban cities. Besides the congestion which relates to the magnitude of travel time, travel time variability is also studied extensively by researchers as an additional measure for transportation network efficiency. In order to enhance the efficiency of urban traffic flow in New York City, numerous policies have been discussed, including different transportation pricing schemes. Pricing schemes-particularly variable pricing-should incorporate the severity of congestion and levels of travel time variability at different times of day and areas throughout the City.

Access the full report at: <http://www.utrc2.org/sites/default/files/Final-Report-Urban-Travel-Time-Variability.pdf>

Completed Research Projects

THE SPATIAL EFFECT OF SOCIO-ECONOMIC DEMOGRAPHICS ON TRANSIT RIDERSHIP: A CASE STUDY IN NEW YORK

Principal Investigator(s): Matthew Volovski, Ph.D

Institution(s): Manhattan College

Sponsor(s): University Transportation Research Center (UTRC)

Demand for vehicle and public transportation systems continues to increase in and around major urban centers. This increase is especially pronounced during the morning and evening commutes and is further complicated by the complex spatial interactions that influence the variation in system demand. In an effort to help agencies better understand this variability and develop better demand forecasts this research investigated the underlying factors impacting public transportation ridership regardless of transit mode, then uses this insight to estimate specific models to help forecast changes in subway ridership.

Access the full report at:

<http://www.utrc2.org/sites/default/files/Final-Report-The-Spatial-Effect-Socio-Economic-Demographics.pdf>

EVALUATING THE IMPACTS OF REAL-TIME INFORMATION ON SUBWAY RIDERSHIP IN NYC

Principal Investigator(s): Candace Brakewood, Ph.D.

Institution(s): City University of New York (CUNY)

Sponsor(s): University Transportation Research Center (UTRC)

It is now common for transit operators to provide real-time information (RTI) to passengers about the location or predicted arrival times of transit vehicles. The Metropolitan Transportation Authority (MTA) in New York City has recently made RTI available for most of the subway, which is the largest urban heavy rail system in the United States. In light of this, the objective of this research is to investigate how RTI is likely to impact subway passengers in New York City.

Access the full report at:

<http://www.utrc2.org/sites/default/files/Final-Report-Evaluating-the-Impacts-of-Real-Time-Information-Subway-Ridership.pdf>

POTENTIAL HYDRODYNAMIC LOAD ON COASTAL BRIDGES IN THE GREATER NEW YORK AREA DUE TO EXTREME STORM SURGE AND WAVE

Principal Investigator(s): Hansong Tang, Ph.D.

Institution(s): City University of New York (CUNY)

Sponsor(s): University Transportation Research Center (UTRC)

This project makes a computer modeling study on vulnerability of coastal bridges in New York City (NYC) metropolitan region to storm surges and waves. Prediction is made for potential surges and waves in the region and consequent hydrodynamic load and scour at bridge piers in conditions of climate change/sea level rise (SLR) and change in hurricane pattern.

Access the full report at:

<http://www.utrc2.org/sites/default/files/Final-Report-Potential-Hydrodynamic-Load-on-Coastal-Bridges.pdf>

STATE UNIVERSITY OF NEW YORK (SUNY)

Publications by Dr. Carlos JL Balsas, Ph.D., AICP; Assistant Professor, Geography and Planning, University at Albany

2018

- **Sustainable Urbanism in Temperate-Arid Climates: Models, Challenges and Opportunities** in the *U.S. Journal of Public Affairs*, DOI: 10.1002/pa.1663

Climate change requires more sustainable urbanism developments. Locales in temperate and arid climates are under added pressure to create more economical, ecological, and just neighborhoods. Do sustainable urbanism developments have advantages over traditional urbanism projects in temperate-arid climates? The main purpose of this paper is to examine four distinct neighborhoods in the southwest of the United States in order to clarify the evolution of sustainable urbanism developments according to the three C's framework of compactness, connectedness, and completeness.

Direct access: <http://rdcu.be/uZKY>

2017

- **The world in the Americas – a reflection on the 2016 World Planning Schools Congress (WPSC) in Rio de Janeiro, Brazil.** *Planning Theory and Practice*, 18(2): 322-327

The 2016 World Planning Schools Congress (WPSC) took place in Rio de Janeiro, Brazil, July 3–8. This was the fourth World Planning Schools Congress, following congresses in Shanghai, China (2001), Mexico City (2006), and Perth, Australia (2011). The impetus for the earlier congresses, carried out under the auspices of the Global Planning Education Association Network (GPEAN), has been the facilitation of greater communication and cooperation among planning schools throughout the world.

- **Where the rubber meets the road: Walking, riding and driving or walking, walking, walking for our health.** *Journal of Transport and Health*, 5: 182–188

Urban livability is highly dependent on transportation planning. A multimodal system allows various modes to coexist, even though our health is greatly affected by how we get around. Twenty first century cities throughout the world are radically different from cities in prior automobile dependent eras. Considerable progress has been made in reversing the carnage associated with the mantra of planning, building and administering cities with the automobile as its sole design element. This is well illustrated in recent planning strategies for New York City, London, Copenhagen, Zurich, Curitiba, Singapore and Hong Kong, among others.

- **The Right to Walk in Cities, A comparative review of Macau, Lisbon and Las Vegas.** *International Journal of Law in the Built Environment*, 9(2): 123-142

Purpose: The purpose of this paper is to analyze walking activity and recent efforts at augmenting walkability conditions in the cities of Macau, Lisbon and Las Vegas.

Design/methodology/approach: This paper has twofold implications for stakeholders with direct responsibilities in the design, planning, building and maintenance of streets and public spaces, and for those who simply use those places at their own discretion.

- **When markets reset, will we regain? Planning lessons from across the Atlantic Ocean.** *Land Use Policy*, 65: 78-92

This paper analyses how metropolises in Arizona (Phoenix and Tucson), U.S., and Portugal (Lisbon and Porto) have developed recently and how their stakeholders have been dealing with processes of metropolitan transformation. Recent regional planning is examined with the intent to understand whether stages of maturity, compact urban development patterns, regulatory and administrative planning traditions, and socio-economic and cultural systems influence territorial coherence.

- **Blending Individual Tenacity with Government's Responsibility in the Implementation of US Non-motorized Transportation Planning (NMT).** *Planning Practice and Research*, 32(2): 197-211

Human powered traveling is filled with risks. It takes individual tenacity to walk and bicycle in many US city streets. The danger of being injured or fatally killed requires responsible government action and a new repoliticization of the transportation priorities. This paper examines the risks involved in exercising the right to walk and bicycle and the authority's responsibility to account for the health, safety and well-being of all individuals. I argue that the implementation of broadly agreed upon non-motorized transportation planning is critical to the success of public policies. The paper reviews concepts, prior policies and trends, remaining dilemmas and planning implications of US non-motorized transportation planning.

Direct access: <http://rsa.tandfonline.com/eprint/D2BHAM2bp2sAJ-DiU7cRM/full#.WmsCd3SulMt>

CORNELL UNIVERSITY

Dr. Ricardo Daziano's Research Project, Sponsored by UTRC; Analyzing willingness to improve the resilience of New York City's transportation system, Published in the Science Direct, Transportation Policy Journal

The goal of this paper is to provide statistical inference for the private willingness to pay for improvements in the resilience to extreme events of the transportation system in New York City. To make inference on the willingness to pay for flood risk reductions, this paper adopts an approach based on discrete choice experiments (Hensher et al., 2005). This objective seeks to provide tools for better informing planning investments to improve both resilience and security of transportation infrastructure and services.

Link to the article: <https://www.sciencedirect.com/science/article/pii/S0967070X17308272>

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Editorial inquiries and submissions can be made by contacting
Nadia Aslam at 212-650-8051 or email at nadia@utrc2.org.

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