

Research News Winter 2012

Region II—University Transportation Research Center

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President for Academic Affairs. Prior to that, Professor Nelson had spent 11 years at the US National Science Foundation (NSF) including

serving as Senior Advisor to the Director.

21st Century Connected Vehicle Test-Bed

The purpose of this mini-conference or symposium, to be held on the campus of the University at Buffalo (UB), the State University of New York (SUNY) in Amherst, NY on June 1st, is to push the envelope regarding test beds for

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Director's Message



"UTRC commences 2012 by welcoming the selection of our consortium to continue receiving Federal Fund."

We commenced 2012 by welcoming the selection of our consortium to continue receiving Federal fund. DOT's Research and Innovative Technology Administration (RITA), which administers the UTC program, used a competitive selection process to select ten University Transportation Centers (UTCs), two Transit-Focused UTCs, and ten Regional UTCs. Each one of the selected UTCs will receive a \$3.5 million grant, which they must match with funds from non-federal sources. Our consortium, which will continue to operate as the Regional Center representing USDOT Region 2, will continue to advance U.S. transportation technology and expertise in research, education, and technology transfer.

We also welcome the Rochester Institute of Technology (RIT), which has joined the existing consortium. As one of the world's leading technological institutions, RIT is a vibrant, connected community that is home to diverse, ambitious, and creative students from more than 100 countries. It offers an incredible array of academic programs; a diverse, committed, and accessible faculty sophisticated facilities; and an unusual emphasis on experiential learning.

As part of our tradition, in January 2012, UTRC faculty, students, and staff have actively participated at the Transportation Research Board (TRB) 91st Annual Meeting held in Washington, D.C. The information-packed program attracted more than 11,000 transportation professionals from around the world to Washington, D.C. I was especially proud to see the important role and leadership that our consortium played toward the success of this gathering. A compendium of presentations by UTRC's affiliated researchers at TRB is available on our website.

As part of our Education and Workforce Development Program, it was with a pleasure that we launched our travel grant program, which had provided financial support to faculty and students throughout our member institutions to attend and participate at the TRB 91st Annual Meeting.

We are very excited about the future of the Center. The faculty, staff, and students continue to be a great source of inspiration for all of us at UTRC. As always, we enjoy sharing our successes and updates with you in our newsletter. We welcome your input, advice, suggestions, and recommendations.

Camille Ramga

Director, UTRC

NEWS & NOTES

Dr. Robert E. Paaswell at the 5th Annual Transportation and Infrastructure Convention at Washington, DC



"A Discussion between our Transportation Think-Tanks": (L to R): Robert Paaswell, Director Emeritus, UTRCs; Petra Todorovich, Director, America 2050; Councilwoman Laura Padgett, City of Wilmington, NC

Dr. Robert E. Paaswell was invited as a speaker at the 5th Annual Transportation and Infrastructure Convention held in Washington, DC from March 7-9. The Annual T&I Convention have received tremendous recognition in past few years. It serves as a platform to unite international, national, state and local transportation policy makers to show a concern towards their specific communities. The convention features key policy makers who highlight special discussions, meetings, receptions, and presentations in the heart of Washington, D.C.

Dr. Paaswell was one of the four speakers for the session; <u>"A Discussion between our Transportation Think-Tanks"</u>. The Transportation and Infrastructure Committee for this session was led by U. S. Congressman John Mica.

The Conference proceedings and speakers' presentations will be available soon. The Convention photographs are uploaded on T&I Convention <u>Facebook page</u>.

UTRC Faculty and Staff Attended the 91st Annual TRB Meeting



UTRC Staff and Students (L to R): Penny Eickemeyer, Associate Director for Researc ; Abhishek Singhal, Research Assistant; Jelly Liu; Ph.D. Student at CCNY; Pierre Emmanuel Fatisson Former French Intern at UTRC

UTRC staff and consortium faculty participated at the 91st Transportation Research Board Meeting held from January 22nd - 26th 2012. There were more than 90 papers and presentations delivered at TRB from UTRC Consortium faculty covering all kind of transportation related topics; Aviation, Bridges, Finance, Economics, Freight, Operations & Traffic Management, Pedestrian and Bicyclists, Policy and Safety, just to name a few. UTRC has compiled a list of all these presentations in a compendium available online at http://www.utrc2.org/ events/assets/ UTRCatTRB2012.pdf



2012 International Road Federation (IRF) Annual Awards Luncheon at TRB meeting

UTRC Staff at IRF Awards Luncheon: From (L) to (R): Penny Eickemeyer, Associate Director for Research; Nadia Aslam, Assistant Director for Technology Transfer; Nathalie Martinez, Research Associate.

UTRC staff members also attended the eminent IRF 2012 Awards Luncheon held on January 25th at the TRB meeting. The Luncheon attendees included government officials, top executives, and industry professionals. IRF awards honor exemplary people and projects that has placed road building industry at the forefront of social and economic development.

Dwight David Eisenhower Transportation Fellowship Recipients Presentations at TRB 2012



Five CCNY Engineering students received Dwight David Eisenhower Undergraduate Transportation Fellowships for this academic year (2011-2012), totaling \$20,500 - Soufiane Nezili (Senior, Civil Engineering - \$7500). Jessica Wang (Senior, Civil Engineering - \$5,000), Diniece Peters (Senior, Civil Engineering - \$5000), Jaime Baculima (Senior, Civil Engineering - \$1500), and Isatou Sanneh (Junior, Computer Science - \$1500). Jessica, who works with Anil Agrawal in the area of bridge engineering, Soufiane, who works with Huabei Liu examining mechanically stabilized earth (MSE) walls, and Diniece, who works with Dr. Alison Conway, examining sustainable urban delivery strategies, all presented their work at TRB.

Dwight David Eisenhower Undergraduate Transportation Fellowship Recipients with

Matthew Daus leads the Very First Taxi Joint Sub-Committee of the TRB's Paratransit Committee

Mr. Daus, UTRC Distinguished Lecturer presented two papers at the 91st Annual TRB meeting; "Societal Role of the Taxi: Developing Taxis in Paratransit. Community Transit, and Demand-Responsive Transit" & "Taxicabs for Improved Urban Mobility: Are We Missing an Opportunity?". Every meeting room was packed to the rafters, and the international mix of regulators (including past and current Commissioners), academics, consultants and public transit officials – all came together for the purpose of laying the foundation for future taxi research. Dr. David King from Columbia University and Dr. Jonathan Peters from College of Staten Island/CUNY were all present to help field question from the audience. Mr. Daus says his special regards to Dr. James Cooper for his efforts in organizing such a successful program, as well as Dr. Ray Mundy for helping to obtain TRB approval to create this subcommittee for our Taxi Research Network. The papers and presentations of this TRB session can be found at http://www.taxiresearch.net/Site/TRB Materials.html.

Being at DC, Matt was involved in other TRB activities included:

- Chairing and leading a discussion to help set the research agenda for both the TRB's Taxi Subcommittee and the International Association of Transportation Regulators' (IATR's) Academic Research Committee
- Meeting with both the past and new Presidents of the American Public Transit Association (Bill Millar and Michael Melaniphy, respectively), to formalize our IATR reciprocity arrangement and develop a joint agenda with the IATR for legislative initiatives, research and conference participation.



From (L) to (R), Matthew W. Daus, Esq. and Angie de la Barrera,COG – Metropolitan Washington Council of Governments and the Regional Taxicab Regulators Task Force

Iobbying Congress on behalf of the IATR with our lobbyist Barry Lefkowitz and our IATR Membership Director Karen Cameron to advance our key legislative item this year – the legal ability for all U.S. regulators to access national criminal background checks for their licensees.

Mr. Daus also delivered a speech to transportation scholars, technology professionals and students at the 2011 BIT City Conference held at Columbia University on Transportation, Data and Technology in Cities. His lecture was entitled Taxi GPS Data - Legal, Privacy and Policy Issues. This and other presentations can be viewed along with information about the BIT City conference at http://bitcityconference.org/.

New Funding/Programs

UTRC Consortium Universities Receive Funding from NYSERDA

Ten organizations and universities have been chosen by the New York State Department of Transportation (NYSDOT) and the New York State Energy Research and Development Authority (NYSERDA) to receive funding to advance research on energy-saving technologies designed to reduce carbon-dioxide emissions in New York State.

The NYSDOT has funded \$700,000 and NYSERDA has funded \$400,000 toward these transportation-related initiatives, which leveraged an additional \$1.3 million in recipient cost-sharing. The goal of the program is to reduce energy and greenhouse gas (GHG) emissions in all facets of transportation in the state.

Organizations and universities receiving funding are working on projects that:

- ⇒ Reduce the number of single occupancy vehicles on the road and promote the use of mass or alternative forms of transit.
- \Rightarrow Improve fuel efficiency by providing real-time driver feedback and traffic conditions.
- $\Rightarrow~$ Demonstrate upstate bicycle sharing as a viable means of alternative transportation.
- \Rightarrow Evaluate innovative freight delivery strategies for congested urban areas.

For more details on each project, please visit <u>NYSERDA website</u>.

"10 Organizations Receive Funding to Explore Technology to Reduce Transportation-Related Greenhouse Gas Emissions." *NYSDOT, NYSERDA Invest \$1.1 Million in Research to Cut Energy Use in Transportation Sector*

RITA Awards Mineta National Transit Research Consortium (MNTRC) as Tier 1 Transit Center

The Alan M. Voorhees Transportation Center at the Bloustein School of Planning and Public Policy, the Rutgers Intelligent Transportation Systems lab, and the Rutgers Infrastructure Monitoring and Evaluation lab (both located within the Intelligent Cyberphysical Systems Center) are part of the new tier 1 transit center led by the Mineta Transportation Institute at San Jose State University (transweb.sjsu.edu). This consortium includes nine leading university transportation centers, functioning together as the Mineta National Transit Research Consortium (MNTRC). Research at Rutgers to be conducted in the first year of funding will include matching current NJDOT funded research on the Benefits of Transit Oriented Development and a project that will evaluate the impacts of rail investments and engineering improvements on transit, among other projects yet to be determined. Total funding for the MNTRC is \$3.49 million, which will be used for research, education, and other projects that help improve public transit. Funding is provided by the Federal Transit Administration (FTA) and distributed through DOT's Research and Innovative Technology Administration (RITA). The federal grant will be matched with funds from local departments of transportation and other sources.

U.S. Department of Housing and Urban Development (HUD) Awards Sustainable Communities Regional Planning Grant for North Jersey Sustainable Communities Consortium

In November 2011, the Alan M. Voorhees Transportation Center at Rutgers University received a \$5 million Sustainable Communities Regional Planning grant from the U.S. Department of Housing and Urban Development to establish and manage The North Jersey Sustainable Communities Consortium. The grant will facilitate a multijurisdictional planning process that will result in a Regional Plan for Sustainable Development in the 13-county North Jersey Transportation Planning Authority region of New Jersey. The plan will be both "place-based" and "issue -based" and will use sustainability, transit system connectivity and Transit-Oriented Development (TOD) as the central framework for integrating plans, regulations, investments, and incentive programs at all levels of government to improve economic and environmental conditions, while promoting regional equity and resource efficiency.

NJDOT Funds the Alan M. Voorhees Transportation Center for Greenhouse Gas Assessment Spreadsheet for Transportation Capital Projects (GASCAP)

The Alan M. Voorhees Transportation Center has received funding from NJ DOT to continue development of the Greenhouse Gas Assessment Spreadsheet for Transportation Capital Projects (GASCAP). The GASCAP model is an integrated assessment tool that aims to provide a means to assess how alternative construction practices can affect greenhouse gas emissions. The development of this tool was specified as an action item in New Jersey's Global Warming Solutions plan. Current research activities include development of a module to assess induced travel impacts of alternative projects, development of methods to link construction equipment activity to project types, and development of methods to account for the full lifecycle maintenance activities on project greenhouse gas emissions. For further information, please contact the Principal Investigator, Dr. Robert Noland (rnoland@rutgers.edu).

SUNY Institute of Technology launches Civil Engineering Program

Bachelor's degree program; the latest addition to undergraduate offerings

SUNYIT, the State University of New York Institute of Technology at Utica/Rome, will offer a new bachelor of science in civil engineering program in fall 2012, the latest addition to a list of recently launched academic offerings that includes biology, community & behavioral health, interdisciplinary studies, and network & computer security.

SUNYIT's CE program will have concentrations in structural, environmental and transportation engineering. The program will be eligible for ABET accreditation after the first class of civil engineering majors graduates. SUNYIT also offers bachelor's degree programs in electrical & computer engineering, civil engineering technology, electrical engineering technology, computer engineering technology, and mechanical engineering technology, and a broad array of programs in technology and professional studies. For more information, e-





Dr. Thomas Wakeman was Appointed as Chair of Marine Group at the Transportation Research Board Annual Meeting



The Transportation Research Board (TRB) is a division of the National Research Council, which serves as an independent adviser to the President, the Congress and federal agencies on scientific and technical questions of national importance. Dr. Thomas Wakeman of Stevens Institute of Technology was recently appointed Chair of the TRB's Marine Group. In this role, Dr. Wakeman will coordinate all marine transportation-related research within the TRB organization with allied research in the National Academies. He was also recently appointed to a 7 member review panel for the US Department of Transportation Maritime Administration's Panama Canal Expansion Study and to a technical expert group for Federal Highway Administration's Gateway and Corridors Concept Forum.

"Dr. Wakeman's experience and expertise have been vital assets to the ongoing research in maritime systems at Stevens," says Dr. Michael Bruno, Dean of the Charles V. Schaefer, Jr. School of Engineering and Science. "His appointment as Chair of the TRB Marine Group is a testament to the impact of his research and the esteem of his colleagues."

To read more about Dr. Wakeman's appointment, please visit Stevens Institute of Technology's <u>News Webpage</u>.

Learn more about maritime research at Stevens by visiting the Center for Maritime Systems or reading the Maritime Systems issue of Nexus, the School of Science and Engineering Research Magazine. Start your own maritime journey at Stevens by visiting the Department of Civil, Envi ronmental and Ocean Engineering, or visit Undergraduate Admissions or Graduate Admissions to apply.

Rensselaer Professor, Michael O' Rourke was Honored as a Fellow of ASCE's Structural Engineering Institute



Structural engineering expert Michael O'Rourke has won the prestigious 2011 Walter P. Moore Award from the American Society of Civil Engineers (ASCE).

The award cites O'Rourke's "significant and career-long contributions to the development of structural codes and standards which have advanced the science of snow load engineering both nationally and internationally." Accurate snow load data is critical for preventing the roofs of buildings from caving in under the weight of snow.

"We congratulate Dr. O'Rourke on this well-deserved recognition and high honor from the American Society of Civil Engineers," said David Rosowsky, dean of the School of Engineering at Rensselaer. "For decades, Mike has been a stalwart voice in the field of structural engineering and design for hazards. He is indisputably the national leader in the area of snow loading, and his extensive research continues to inform building codes around the world. We are honored to count him among the outstanding engineering faculty at Rensselaer."

The ASCE presented the award to O'Rourke in mid-April at a conference in Las Vegas. O'Rourke is a faculty member in the Department of Civil and Environmental Engineering at Rensselaer, and is affiliated with the university's Center for Earthquake Engineering Simulation.

To read more about Dr. O'Rourke's award, please visit RPI's news at: <u>http://news.rpi.edu/update.do</u>

Dr. Laxmi Ramasubramanian was elected the new President-Elect of the University Consortium for Geographic Information Science (UCGIS)



Laxmi Ramasubramanian, PhD, AICP, Associate Professor of Planning and Design at Hunter College of the City University of New York was recently chosen to become the new President –Elect of the University Consortium for Geographic Information Science (UCGIS). Dr. Ramasubramanian, an architect and urban planner, has been active in UCGIS for over a decade in different capacities, most recently, as an elected member of the board of directors.

The University Consortium for Geographic Information Science (UCGIS), established in 1995, is a professional hub for the GIS research and education community and serves as a national voice and advocate for its members' interests. As a nonprofit association, UCGIS is governed by a nine member board of directors, with a Council of Delegates that represent more than 60 member universities. Dr. Ramasubramanian was selected as President-Elect by a vote of the Council of Delegates at its Summer Assembly. In addition to convening research meetings, UCGIS sponsors workshops, curriculum-related projects, and other special initiatives designed to benefit the academic community and the field of GIS as a whole.

Laxmi Ramasubramanian can be reached at laxmi@hunter.cuny.edu

You can learn more about UCGIS at www.ucgis.org To learn more about Dr. Laxmi's achievements and work, please visit the webpage at: http://maxweber.hunter.cuny.edu/urban/index.php

New Staff

New Staff at UTRC



U TRC welcomes **Mr. Nathan Stodola**, Research Associate, to our UTRC staff family. Nathan Stodola holds a Master's Degrees in Mechanical Engineering (Columbia University) and Transportation Engineering (City College) and has worked in a variety of disciplines. As a researcher at the Earth Institute at Columbia University, he investigated the potential for increased solar energy deployment based on the timing of sunlight and dispatchable electricity consumption across the United States. He also worked at the Clever Fellows Innovation Consortium, testing and designing thermoacoustic (sound-powered) refrigerators. His work at UTRC has involved High Speed Rail and projects with NYMTC.



We also welcome Lindsay Donnello who has joined UTRC as a Research Assistant in the fall 2012. Ms. Donnellon has a Bachelor of Arts from the University of Vermont and a Geographic Information Systems Certificate from the University of Washington. Currently, she is pursuing a Master's of Science in City & Regional Planning from Pratt Institute.

Prior to joining UTRC, Lindsay interned for the Puget Sound Regional Council in support of the Data Systems & Analysis team, where she collaborated on the bi-annual regional parking study. While earning her GIS certificate, she reviewed GIS bicycle data for the Seattle Department of Transportation in preparation of producing a flat and web-based 2011 Bicycle Map.

Lindsay looks forward to her work at UTRC supporting projects relating to long range transportation financing and CMAQ applications

Faculty ^Profile

Priscilla P. Nelson Professor of Civil & Environmental Engineering The New Jersey Institute of Technology



Dr. Priscilla Nelson, Professor of Civil and Environmental Engineering, originally joined the New Jersey Institute of Technology in 2005 and served a term as Provost and Senior Vice-President for Academic Affairs. Prior to that, Professor Nelson had spent 11 years at the US National Science Foundation (NSF) including serving as Senior Advisor to the Director. She was a Professor in Civil Engineering at the University of Texas at Austin from 1983 to 1996.

Professor Nelson has an international reputation in geological and rock engineering, and the particular application of underground construction. She also has worked in the areas of critical infrastructure, emergency response and disaster recovery. Dr. Nelson has published more than 120 technical and scientific publications in refereed journals and conference proceedings. She is a Distinguished Member of the American Society of Civil Engineers (ASCE), former president of the Geo-Institute of ASCE, a lifetime member and first president and Fellow of the American Rock Mechanics Association, and a Fellow of the American Association for the Advancement of Science (AAAS). She was elected Chair of the Division of Engineering of AAAS in 2007. In addition to these positions, she has many other professional affiliations including: Sigma Xi, Tau Beta Pi, the American Underground-Construction Association, the Association of Engineering Geologists, the International Tunneling Association, the Society of Women Engineers, and the American Society for Engineering Education (ASEE).

Dr. Nelson has received many honors and awards, including teaching awards at The University of Texas at Austin (1985-1987), the Case Studies Award and the Basic Research Award from the US National Committee for

Rock Mechanics (NAE), election to The Moles - an association of the heavy construction industry (1995), and induction into Tau Beta Pi as an Eminent Engineer (2007). In 2008 she received the Kenneth Andrew Roe Award from the American Association of Engineering Societies (AAES), and she will be the 2011 recipient of the ASCE Henry L. Michel Award that recognizes and acknowledges leaders of the design and construction industry whose dedication and aggressive vision have provided cornerstones for improving the quality of people's lives around the world through research in the design and construction industry. She is currently a member of the Advisory Group to the Center for Engineering, Ethics, and Society of the US National Academy of Engineering (2008- present).

Dr. Nelson has been a part of several major construction projects, including field engineering responsibilities during construction of the Trans-Alaska Pipeline System, and serving as a consultant to the U.S. Department of Energy and the State of Texas for the Superconducting Super Collider project. She received Presidential appointments to the U.S. Nuclear Waste Technical Review Board in 1997 and 2001.

Dr. Nelson received her BS degree in geological sciences from the University of Rochester (1970) and two master's degrees in geology (Indiana University, 1976) and structural engineering (University of Oklahoma, 1979). In 1983, she received her PhD degree in geotechnical engineering from Cornell University.

For more information, please visit Dr. Nelson's webpage at: http://civil.njit.edu/people/nelson.php

Recent Events

UTRC Co-Sponsors the Eight Annual Lewis Mumford Lecture on Urbanism



UTRC co-sponsored the Eight Annual Lewis Mumford Lecture on Urbanism with the NYC Transportation Commissioner, Janette Sadik-Khan. The event was hosted by the Graduate Program in Urban design Bernard and Anne Spitzer School of Architecture at the City College of New York.

The lecture webcast is available at : <u>http://</u> www.totalwebcasting.com/view/?id=ccnyssa#

UTRC Co-sponsored a Federal Highway Administration (FHWA) Peer Exchange Meeting hosted by the University at Buffalo/SUNY

The University at Buffalo hosted a Federal Highway Administration Peer-Exchange meeting on March 15, 2012 on the University at Buffalo North Campus. UTRC co-sponsored the event. The focus of the meeting wass on Transportation Systems Management during Inclement Weather Emergencies.

The scheduled Peer-exchange meeting is a part of a Federal Highway Administration (FHWA) funded research project currently being conducted by the University at Buffalo (UB), the State University of New York in partnership with the Greater Buffalo Niagara Regional Transportation Council (GBNRTC) and the Niagara International Transportation Technology Coalition (NITTEC). In this project, UB researchers have been working on the development, extension and calibration of a large-scale micro-simulation of the Greater Buffalo-Niagara Metropolitan area using TRANSIMS, an agent-based micro-simulation modeling platform originally developed at Los Alamos National Lab for FHWA. In that regard, UB is building on the original model developed by Volpe National Transportation Systems Center for the region.

The meeting's presentations are available at : <u>http://</u> <u>mceer.buffalo.edu/research/Infrastructure and Public Policy/</u> <u>TRANSIMS/Peer Exchange Meeting.asp</u>

UTRC Book Talk Event Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives



Jarrett Walker, Principal Consultant with MRCagney in Australia and a Freelance Consultant in North America delivered a presentation on his book, human transit on February 6th 2012 at the Graduate Center, CUNY. The event was well attended and received a positive feedback from the audience.

Synopsis

Public transit is a powerful tool for addressing a huge range of urban problems, including traffic congestion and economic development as well as climate change. But while many people support transit in the abstract, it's often hard to channel that support into good transit investments. Part of the problem is that transit debates attract many kinds of experts, who often talk past each other. Ordinary people listen to a little of this and decide that transit is impossible to figure out.

Jarrett Walker believes that transit can be simple, if we focus first on the underlying geometry that all transit technologies share. In Human Transit, Walker supplies the basic tools, the critical questions, and the means to make smarter decisions about designing and implementing transit services.

Human Transit explains the fundamental geometry of transit that shapes successful systems; and the local choices that lead to transitfriendly development.

At the heart of the book is a challenge to land use planners and architects to respect the intrinsic geometry of transit networks at the earliest stages of development, in the same way that all development respects the intrinsic geometry of road networks. It's fun to imagine that some new technology will make transit work in a new way, but as Walker cautions, "technology never changes geometry." He goes on to show that respect for transit's geometry can unleash a flood of new ideas, from new ways to "repair" the suburban arterial to new strategies for envisioning the urban structure.

Upcoming Events

Spring 2012 ITS-NY FORUM WORKSHOP: "Managing Weather-Related Events with ITS Technologies"

UTRC is co-sponsoring Spring 2012 ITS-NY Forum Workshop on April 12, 2012. The Forum's Agenda will focus on how ITS technologies can assist in the handling of weather-related events, and presenters will speak on Managing Operations, Enhancing Traveler Information, Fleet Management, and Enhanced Technologies for Weather Emergencies. A tour of the Hudson Valley Transportation Management Center will be offered at the conclusion of the workshop.

Workshop: April 12, 2012, 10:00 a.m. – 4:00 p.m. followed by TMC Tour at 4:15 p.m. at the Hudson Valley Transportation Management Center 200 Bradhurst Avenue, Hawthorne, New York 10532 For registration information, please visit <u>http://utrc2.org/events/events.php?viewid=323</u>

Visiting Scholar Seminar Spring 2012 Series



Performance and Policy Reform of The U.S. Transportation System

Dr. Clifford Winston, a senior fellow in the Brookings Institution's Economic Studies program, will deliver a visiting scholar seminar on April 13th 2012. Clifford Winston, a senior fellow in the Brookings Institution's Economic Studies program, has been with Brookings since 1984. He is an applied microeconomist who specializes in the analysis of industrial organization, regulation, and transportation.

Winston has also been co-editor of the annual microeconomics edition of Brookings Papers on Economic Activity. Prior to his fellowship at Brookings, he was an associate professor in the Transportation Systems Division of the Massachusetts Institute of Technology's Department of Civil Engineering.

Dr. Winston received his A.B. in economics from the University of California at Berkeley in 1974, his M.Sc. from the London School of Economics in 1975, and his Ph.D. in economics from U.C. Berkeley in 1979.

For more details and registration information, please visit our website at http://www.utrc2.org/events/index.php

Date & Time: April 13, 2012 from 9:30 am to 12:00 pm Location: Baruch College Conference Center

Wider Economic Benefits of Transport Investment and the Role of Agglomeration Economies



Dr. Daniel Graham, a Reader in Transport Economics and Statistics in the Center for Transport Studies at Imperial College London will present on the topic of transportation investment and role of agglomeration economies on April 27th. Dr. Graham specialises in the statistical modelling of transport systems. His main research themes are concerned with the implications of transport investment for productivity and economic growth; modelling efficiency in public transport provision; and with the wider consequences of travel demand patterns particularly in relation to safety, congestion, and environmental impacts. His modelling of the impacts of accessibility on the real economy forms the basis for the assessment of wider economic impacts in transport appraisal internationally. He is currently engaged in projects on Bayesian inference for road traffic accident prediction, mixed model propensity score approaches for causal inference, and semiparametric double robust estimation for continuous treatment effects.

Dr Graham also holds the post of Research Director of the Railway and Transport Strategy Centre (RTSC), a research group incorporating 15 full-time staff members at Imperial College. He teaches Masters courses in Statistics for Advanced Transport Modelling and Microeconomic Theory. Dr Graham provides advice to UK government departments, including the Department for Transport and the Treasury and was appointed Specialist Advisor to the Parliamentary Select Committee on Transport.

For more details and registration information, please visit our website at http://www.utrc2.org/events/index.php Date & Time: April 27, 2012 from 9:30 am to 12:00 pm Location: Baruch College Conference Center

Connecting the Dots: Future Housing Development in Post-recession America



Oliver Hartleben, a Guatemalan architect and city planner will present a seminar on future housing development in Post-recession America on May 18th, 2012. He is currently pursuing a public administration degree at the Harvard Kennedy School. Before coming to Boston, he worked for seventeen years with the City of Guatemala, lastly as Director of Urban Planning, where he oversaw the complete revision of the zoning and subdivision ordinances and the planning of the city's first bus rapid transit line. In addition to his work as a public servant, he has consulted the private sector in different Central American countries on urban and transportation design issues, and taught urbanism and traffic engineering courses at public and private universities in Guatemala. During the Summer of 2011, he worked at IBI Group on a research project on the post-recession future of the housing market in the US.

For more details and registration information, please visit our website at http://www.utrc2.org/events/index.php

Date & Time: May 18th, 2012 from 9:30 am to 12:00 pm Loction: Baruch College Conference Center

Note: Mr. Hartleben will also be presenting at NJDOT office at Trenton on May 17th under UTRC Joint Technology Transfer Program with NJDOT.

News from Our Partner Agencies

New Jersey Department of Transportation Welcomes New Staff

The New Jersey Department of Transportation (NJDOT) Bureau of Research is undergoing reorganization due to recent attrition including the retirement of Robert Sasor in July 2011 and Vincent Nichnadowicz in March 2012. NJDOT is pleased to announce the following additions to its staff: Project Engineer: Paul Thomas; Principal Engineer: Priscilla Ukpah; and Civil Engineer Trainees: Aly Meleis, and Alejandro Perez De Leon.

Paul started with our Bureau three months ago, and brings 28 years experience of state service and division planning. Paul was previously employed in the Division of Civil Rights and has managed Title VI and Environmental Justice, ADA (American Disability Act), NSTI (National Summer Transportation Institute), and has worked with Rutgers University to deliver training to DOT employees, counties and municipalities. Paul also has pavement experience acquired through his Lifetime Asphalt Technology Certificate received from New Jersey Society of Asphalt Technologists. Paul has a degree in Applied Science from MCCC. He is also a Certified Public Manager.

Priscilla started with our Bureau seven months ago, and brings 21 years experience working for DOT. Priscilla holds undergraduate degrees in Civil Engineering; Construction Management and Building Engineering, as well as a Masters in Engineering Management. Priscilla's prior experience includes working in Bridge Structural Evaluation, Project Management, and Planning (Transportation Demand Management).

Aly joined our team in February of this year, He has 4 years of experience in the field of Construction Inspection, Structural Design and Project Management, He has a B.E. in Civil Engineering from Alexandria University, and a Masters in Civil Engineering (Structural Design & Construction Management); he also has his Engineer in Training (EIT) certificate.

Alejandro also joined our team in February of this year. Prior experience includes working at AECOM for the Capital Cost Group, assigned to the Amtrak/ LIRR Ventilation Rehabilitation Project reviewing and approving change order work. He has a B.E. in Civil Engineering from The City College of New York, as well as an Engineer in Training (EIT) certificate from NY State. Please join us as we say good bye to our retirees and in welcoming our new staff who will assist in research project management and knowledge and technology transfer activities.

Call for Papers

3rd International Conference on URBAN TRANSPORTATION SYS-TEMS

November 11 - 14, 2012 | National Conservatory of Arts and Crafts | Paris, France

The Committee on Public Transportation of the Transportation & Development Institute (T&DI) of the American Society of Civil Engineers (ASCE) invites you to submit papers for presentation at the ASCE's Third International Conference on Urban Transportation Systems to be held in November, 2012 in Paris, France. This Conference will offer a forum for civil engineers seeking to address civil engineering applications associated with all modes of public transportation, including bus and rail. The civil engineering profession, through its many sub-disciplines, provides a vast array of specialized knowledge toward the science of safe and efficient movement of people and goods. Civil engineers throughout the world take on many important roles in support of the public transportation industry.

The conference will have four parallel tracks covering the following topics:

- Planning, environment, and finance
- Operations & maintenance of systems infra-

structure

- Design and construction of infrastructure
- Innovative systems and practices

For more information, please visit the ASCE website at: http://content.tanddi.org/CallForPapersICUTS2012.html



CONNECTED VEHICLE TEST-BED & DEVELOP-MENT INTEGRATION WORKSHOP

UNIVERSITY TRANSPORTATION RESEARCH CENTER - REGION II

Mini-Conference on 21st Century Connected Vehicle Test-Bed Development & Integration

In collaboration with: University at Buffalo, SUNY & Rutgers University, SUNJ

Date: June 1st, 2012

Location: 101 Davis Hall School of Engineering and Applied Sciences University at Buffalo The State University of New York Buffalo, NY 14260

The purpose of this mini-conference or symposium, to be held on the campus of the University at Buffalo (UB), the State University of New York (SUNY) in Amherst, NY on June 1st, is to push the envelope regarding test beds for connected vehicles. The symposium also aims at building a strong working network among higher education institutions, government and industry for next generation technology, and at highlighting some of the Northeast region's leading research and researchers in the field of connected vehicles and develop a series of next-step scenarios.

The conference website with the registration information will be launched soon!

Research Highlights & Publications

UTRC Sponsored Research Four Projects Completed

<u>Seismic Design Considerations: Volume I: Technical Approaches and Results</u>

Anil Agrawal, Michel Ghosn The City College of New York/CUNY

NJDOT has adopted "AASHTO Guide Specifications for LRFD Seismic Bridge Design" approved by the Highway Subcommittee on Bridges and Structures in 2007. The main objective of research presented in this report has been to resolve following issues for an effective implementation of AASHTO Guide Specifications: (i) AASHTO Guide Specifications don't provide any specific guidelines for classification and performance requirements for critical bridges. This issue is resolved by proposing performance requirements and classification criteria for critical bridges in New Jersey. (ii) Guide Specifications present displacement based approach, which is significantly different than the force-based approach in previous versions of seismic guidelines. (iii) NJDOT maintains an extensive electronic database of soil boring logs for the State of New Jersey. A zip-code based soil site map for New Jersey has been developed by analyzing soil boring data and other available New Jersey soil information. (iv) AASHTO Guide Specifications introduce seismic design categories based on local seismicity and soil properties. Using the seismic soil map and zip code based seismic spectra provided in the AAHSTO Guide Specifications, seismic design category maps for critical and standard bridges in New Jersey have been developed. A detailed guideline on developing site-specific spectra has also been developed, since AASHTO Guide Specifications recommend site-specific spectra for critical bridges. (v) Existing bridges in New Jersey are required to be retrofitted on the basis of 2006 Edition of the "Seismic Retrofitting Manual for Highway Structures: Part 1 - Bridges". Simplified guidelines for seismic retrofit of existing bridges, that are consistent with guidelines for the design of new bridges in AASHTO Guide Specifications, have been developed.

The final report can be accessed at: http://utrc2.org/research/projects.php?viewid=150

New York City Park and Ride Study

José Holguín-Veras, Ph.D., P.E. John (Jack) Reilly, Ph.D. Felipe Aros-Vera Research Assistant, Rensselaer Polytechnic Institute

Despite of New York City' high rate of public transportation use, congestion is the most complex problem to solve in the short and long run. The solution requires effective and economical strategies involving agencies, policy makers, and travelers. Park and Ride (P&R) facilities allow commuters to benefit from the use of both modes—car and transit—in a combined, and efficient manner.

The USDOT has recognized the importance of Park and Ride facilities as a way of reducing congestion and enhancing public transportation on New York City. This project proposes a structured and systematic procedure to assess P&R candidates. The methodology was applied to the commuter market of New York City to candidates on the surrounding boroughs to Manhattan. The results show that there are high levels of user benefits associated with the introduction of P&R sites in the outer boroughs and inner suburbs of New York City. The final report can be accessed at: <u>http://utrc2.org/research/</u> <u>assets/187/FinalReportNYCPRStudy1.pdf</u>

<u>A Prototype Decision Support System for Optimally Routing Border Crossing Traffic Based on Predicted Border</u> <u>Crossing Times</u>

Dr. Adel W. Sadek Dr. Qian Wang University at Buffalo, State University of New York

This reports highlights the issue of traffic volumes at the Niagara Frontier border crossing and queueing models to estimate the future border delay. The economic vitality of the "Golden Horseshoe", a densely populated and industrialized region which encompasses Southern Ontario, Canada and parts of New York State including the Buffalo-Niagara Region, is heavily dependent upon the ability to move goods freely and efficiently across the Canadian-US border. This highlights the critical importance of the Niagara Frontier International border crossing, one of North America's busiest portals for travel and trade. This study had two primary objectives. The first objective was to develop a forecasting method for the on-line, shortterm prediction of hourly traffic volumes at the Niagara Frontier border crossings. The second objective of the study was to develop queueing models which would use the predicted traffic volume to estimate the future border delay. As a case study, the project considers the Peace Bridge border crossing, which is one of the busiest Niagara Frontier border crossings, serving over 4.76 million cars annually.

The final report can be accessed at: <u>http://utrc2.org/research/assets/198/</u> FinalReportMultimodelforecastingbordercrossing1.pdf

Freight Demand Estimation from Secondary Sources

Dr. José Holguín-Veras Dr. Xuegang (Jeff) Ban Rensselaer Polytechnic Institute

This report explains how to estimate freight demand using secondary source of data such as traffic counts. Freight origin-destination (OD) matrices are one of the most important data elements a planner could have, which is why a significant amount of effort, time and money is spent on their estimation. The estimation of OD matrices can be done by: (a) direct sampling methods; and, (b) using secondary data sources such as traffic counts. The latter techniques are referred to here as origin-destination synthesis (ODS).

OD data are obtained by interviewing the participants in the transportation activity and have some well-known limitations: roadside interviews tend to double count trips; on-board interviews may lead to bias in the parameters of random utility models; mail interviews are often biased because the rate of response varies across the population; and home interviews, though able to provide statistically sound estimates of OD, require a great deal of planning, time, effort and money (Ortúzar and Willumsen, 2001).The final report can be accessed at: <u>http://utrc2.org/research/assets/201/</u> <u>FinalReportFreightDemandEstimation1.pdf</u>



Published Papers Dr. Rachel Weinberger Authored a Paper in Transport Policy Journal titled; "Death by a thousand curb-cuts: Evidence on the effect

of minimum parking requirements on the choice to drive"

Dr. Rachel Weinberger, Professor at the University of Pennsylvania authored a paper in the Transport Policy Journal on "curb-cuts and Parking requirements. An abstract of the papers is as follows:

Abstract:

Little research has been done to understand the effect of guaranteed parking at home—in a driveway or garage—on mode choice. The research presented here systematically examines neighborhoods in the three New York City boroughs for which residential, off-street parking is possible but potentially scarce. The research is conducted in two stages. Stage one is based on a Google Earth© survey of over 2000 properties paired with the City's tax lot database. The survey and tax lot information serve as the basis to estimate on-site parking for New York City neighborhoods. With parking availability estimated, a generalized linear model using census tracts as the unit of analysis, is used to estimate the maximum likelihood parameters that predict the proportion of residents who drive to work in the Manhattan Core.

The research shows a clear relationship between guaranteed parking at home and a greater propensity to use the automobile for journey to work trips even between origin and destinations pairs that are reasonably well and very well served by transit. Because journey to work trips to the downtown are typically well served by transit, we infer from this finding that non-journey to work trips are also made disproportionately by car from these areas of high on-site parking.

To access the full paper, please follow the link: <u>http://</u> <u>www.sciencedirect.com/science/article/pii/S0967070X11001028</u>

Jim Cohen Presented a Paper at the International Union of Railways in Paris, France

Jim Cohen, John Jay College/ITS/CUNY, presented a paper at a specially convened Colloquium on the history of speed in railways, held at the International Union of Railways (UIC) in Paris, France, in December, 2011. Prof. Cohen's peer- reviewed paper was titled: "Publicprivate ownership, finance and speed on American Railways, 1830-1995." While in France, Cohen also gathered information and interviewed officials from the French National Railways (SNCF), the Réseau Ferré Francais (builders-operators of rail infrastructure), as well as investment banks and other organizations and individuals involved in planning the first-ever public-private partnership for financing a high speed rail line in France (Tours to Bordeaux). Jim is working with Camille Kamga and Nathan Stodola on this project, which will result in an article in a special issue of the journal, Research in Transportation Business and Management, on "Lessons From Forty Years of Railroad Privatization and Deregulation: Worldwide Experience."

Presentations

University of Buffalo/SUNY Co-sponsored the 2011 ITE NY Upstate Section Annual Meeting

The University at Buffalo helped in the organization of the joint Institute of Transportation Engineers (ITE) New York Upstate Section 2011 Annual Meeting and the Highway Data Workshop and Conference which was held September 21 – 23, 2011 in Buffalo. Several UB faculty and graduate students participated in the event and gave presentations during that event on topics ranging from transportation modeling and simulation, ITS data warehouses, and driving simulators and distracted driving. Additional information on the conference could be found at: <u>http://sites.google.com/</u> <u>site/2011nyuite/home</u>

Rensselaer Professor, Mark Rea, was invited to Give Trotter Paterson Memorial Lecture in London, England

Mark Rea, professor at Rensselaer Polytechnic Institute and director of the <u>Lighting Research Center</u> (LRC) at Rensselaer, was invited to London England to deliver the Trotter Paterson Lecture. The Trotter Paterson lecture is a biennial event created in 1951 to commemorate two past Presidents of the United Kingdom Illumi-

nating Engineering Society, Alexander Trotter and Sir Clifford Paterson. The honorific lecture is sponsored by the Society of Light and Lighting, part of the Chartered Institution of Building Services Engineers (CIBSE). Rea is the first American to be so honored.



You can view a copy of Rea's Trotter Paterson presentation at http://www.sll.org.uk/images/stories/downloads/rea%20-% 20tpl%202012.pdf.

The full article, "What ever happened to visual performance?" is in press at the Lighting Research & Technology journal. To learn more about the LRC's transportation lighting and safety research, visit

www.lrc.rpi.edu/programs/transportation/index.asp.

Rutgers Professor, Dr. Kaan Ozbay's Presentations at TRB

Rutgers Intelligent Transportation Systems Laboratory presented 9 papers at the 91st Annual Meeting of the Transportation Research Board, from January 22-26, 2012 in Washington, DC. Led by Professor Kaan Ozbay of Rutgers University Department of Civil Engineering, and Intelligent Cyberphysical Systems Center, RITS is a research lab engaged in transportation engineering and planning studies. Professor Ozbay leads a team of 10 funded graduate students and 2 full-time researchers, all of whom were engaged in presentation of 9 papers at TRB 2012. The papers featured were:

- Use of Simulation to Assess Safety Performance
- Network Origin-Destination Estimation, Disaster Response, and Vulnerability
- Active Freeway Traffic Management and Freeway Operations
- Work Zone Analysis Tools
- Development of Intelligent Transportation Systems: Methodologies and Practices
- Current Research on Transportation Security and Protection of Critical Infrastructure
- Harnessing New Data Sources: Bluetooth Readers and Probes
- Emergency Evacuation Research Developments
- Advances in Transportation Network Modeling

Dr. Catherine Lawson Presentation on wimWEB Visualization Tool at TRB

Dr. Lawson, an associate professor of Geography and Planning Department at the University at Albany/SUNY made several wimWeb.net presentations at 2012 TRB committee meetings to both national and international audiences, and the newest version has since been gaining popularity among government agencies and private companies. WimWEB.net, an Internet based traffic visualization tool that intelligently displays streamlined traffic data graphs, and last mentioned in the Summer 2011 profile of Dr. Lawson, is making steady advancement. wim-WEB.net now has a dedicated management and support team working in the Regional Economic Freight Informatics Laboratory (REFIL) in the Lewis Mumford Center for Comparative Urban and Regional Research at the University at Albany. In addition to a comprehensive set of charts and graphs, wimWEB also generates and exports standard federal reports. The tool features a re-vamped interface and Google maps integration, which increases the functionality and customization of mapping layers. The wimWEB tool also integrates an extensive Data Quality Control process which will analyze and check raw WIM data. The wimWEB team is always looking for feedback, and those interested in viewing the wimWEB traffic tool can sign up for a free demo at <u>www.wimweb.net</u>.

Recent Publications/Presentations

- Tong, Zheming, Yan Wang, Monin Patel, Patrick Kinney, Steven Chillrud, K. Max Zhang. 2012. <u>"Modeling spatial variations of black carbon particles in an urban highway-building environment.</u>" Environmental Science & Technology 46 (1): 312-319.
- Steffens, Jonathan T., Yan Wang, K. Max Zhang. 2012. "Exploration of effects of a vegetation barrier on particle size distributions in a near -road environment." Atmospheric Environment50: 120-128
- Wang, Xing, Dane Westerdahl, Jingnan Hu, Ye Wu, Hang Yin, Xiaochuan Pan, K. Max Zhang. 2012. <u>"On-road diesel vehicle emission factors</u> for nitrogen oxides and black carbon in two Chinese cities." Atmospheric Environment 46 (1): 45-55.
- Chatman, Daniel C., and Robert B. Noland, 2011, "Do public transport investments increase agglomeration economies? A review of literature and agenda for research", <u>Transport Reviews</u>, 31(6), 725-742.
- Sehatzadeh, Bahareh, Robert B. Noland, and Marc D. Weiner, 2011, "Walking frequency, cars, dogs, and the built environment", <u>Transpor-</u> <u>tation Research A: Policy and Practice</u>, 45, 741-754.
- Lachapelle, Ugo and Robert B. Noland, 2012, "Does the commute mode affect the frequency of walking behavior? The public transit link", <u>Transport Policy</u>, 21, 26-36.
- Klein, Nicholas J., and Andrew Zitcer, 2012, "Everything but the Chickens: Cultural Authenticity Onboard the Chinatown Bus", <u>Urban Geography</u>, 33(1), 46-63.
- Rae Zimmerman, "Adaptability of Critical Infrastructure and the September 11, 2001 Attacks in New York City," The CIP Report, George Mason University, School of Law, Center for Infrastructure Protection and Homeland Security, Arlington, VA, Vol. 10, No. 3, September 2011, pp. 10, 11, 30. <u>http://cip.gmu.edu/archive/CIPHS TheCIPReport September2011 9 11 10thAnniversary.pd</u>
- A. J. Tracy, P. Su, A. W. Sadek, Q. Wang. (2011). Assessing the Impact of the Built Environment on Travel Behavior: A Case Study of Buffalo, New York. *Transportation*, Vol. 38, Issue 4, pp. 663-668.
- A.W. Sadek, <u>Y. Zhao, S. Huang, D. Fuglewicz</u>, K. Hulme, and C. Qiao. (2011). Advanced Transportation Simulation Modeling for Transportation System Evaluation and Management during Emergencies. Special online Issue of the *Journal of Homeland Security on Catas trophes and Complex Systems: Transportation.*



News Articles

The Right Idea in the Wrong Place



<u>Rick Geddes</u> is an associate professor of policy analysis and management at Cornell University, a research associate at the Mineta Transportation Institute, and a visiting scholar at the American Enterprise Institute. <u>http://www.nytimes.com/roomfordebate/2012/01/26/does-california-need-high-speed-rail/californias-high-speed-rail-is-the-right-idea-in-the-wrong-place</u>

NYSERDA Partners with Clarkson AMD Others to Demonstrate Wind-Powered Data Centers Researchers Seek to Transform Data Center Industry with Distributed Networks, Renewable Energy

The New York State Energy Research and Development Authority (NYSERDA) has partnered with Clarkson University, Advanced Micro Devices Inc. (AMD), HP and other private businesses to demonstrate how a network of wind- and solar-powered data centers could create a new model for data center and renewable energy operations.

To read more, please visit the following press releases: <u>http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-08-01-NYSERDA-Clarkson-AMD-to-Demonstrate-Wind-Powered-Data-Centers.aspx</u> http://www.clarkson.edu/news/2012/news-release_2012-02-21-2.html

Hailing the Wrong Taxi; Matthew Daus's Op-Ed Article in NY Times

<u>Matthew W. Daus</u>, a lawyer, was the chairman of the New York City Taxi and Limousine Commission from 2001 to 2010. WHEELCHAIR users have long been deprived of a quintessential New York City experience: riding in a taxi. So after years of discussion, litigation and experimentation, the governor and the mayor of New York last month <u>announced</u> a <u>deal</u> to put 2,000 wheelchair-accessible cabs on the streets, setting aside <u>up to \$54 million</u> in subsidies and loans to retrofit vehicles for wheelchair use or buy new wheelchair-accessible vehicles. To read the full article, please visit : <u>http://www.nytimes.com/2012/01/05/opinion/improving-taxi-service-for-wheelchair-users.html?r=1</u>

Green Routing" Can Cut Car Emissions Without Significantly Slowing Travel Time, Buffalo Study Finds

The research project "<u>An Evaluation of Likely Environmental Benefits of Lowest Fuel Consumption Route Guidance in the</u> <u>Buffalo-Niagara Metropolitan Area</u>" funded by Federal Highway Administration is highlighted in the University of Buffalo news services

The path of least emissions may not always be the fastest way to drive somewhere. But according to new research from the University at Buffalo, it's possible for drivers to cut their tailpipe emissions without significantly slowing travel time. In detailed, computer simulations of traffic in Upstate New York's Buffalo Niagara region, UB researchers Adel Sadek and Liya Guo found that green routing could reduce overall emissions of carbon monoxide by 27 percent for area drivers, while increasing the length of trips by an average of just 11 percent.

To reac the full article, please visit: <u>http://www.buffalo.edu/news/fast-execute.cgi/article-page.html?article=130700009</u>



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