



Research News

Fall 2010

November 2, 2010

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INSIDE

- Director's Letter
- News & Notes
- Recent Events
- Upcoming Events
- Research Highlights & Publications

UPCOMING EVENTS

- Thinking & Doing Breakfast Series – Fall 2010
- New Thinking on Transportation and Society: Doctoral Research Series
- Airport as Engines of Economic Development – Nov 8, 2010
- Transportation Choices for Individuals with Autism – April 20, 2011

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DIRECTOR'S LETTER



It has been a year since I assumed the role of Acting Director of the University Transportation Research Center. Please know that the high level of expertise, collaboration, and dedication of our staff and members continues to be well received. My thanks to each of you.

On August 20, 2010, we lost a dear friend, Robert Olmsted. Bob was more than just a wonderful person; he was so kind and considerate to us that we always welcomed seeing him at every opportunity and frequently at our Visiting Scholar Seminar series. Bob was one of New York's leading transportation planners

and we will all miss him.

During the past months, we have been actively participating at conferences, seminars, workshops, and visits to our partners. These venues go a long way toward promoting our center theme of “Planning and Managing Regional Transportation Systems in a Changing World” and the work we do.

On June 14, we co-hosted “Airports: 21st-Century Makeovers for the NY Metro Region” with the Steven L. Newman Real Estate Institute and the CUNY Aviation Institute. Top officials from the FAA and Port Authority, aviation executives and other aviation experts, and representatives of leading NGOs examined airports’ contributions to our economy. We participated at the World Congress for Transportation Research (WCTR) at Lisbon, Portugal and at the Annual Meeting for the International Association of Transportation Regulators (IATR) at Chicago, where we presented our collaborative research plan with the Taxi Research Network.

On September 24, 2010, we actively participated in the **2010 New York State Transportation Summit**, which gathered leaders from public agencies and private industry to discuss upcoming major infrastructure and development initiatives and explore partnership models that will take New York into a new transportation era. Dr. Robert E. Paaswell, our Director Emeritus, delivered the morning keynote address.

We hosted a seminar on High Speed Rail in which Rod Diridon, Executive Director of the Mineta Transportation Institute, examined sustainability and demonstrated how high speed rail can be utilized to meet its goals. Our students were active as well. This year’s recipients of the September 11th Memorial Program for Regional Transportation Planning Academic Initiative made presentations of their projects at the New York Metropolitan Transportation Council. The presentations were well attended and favorably received by the representatives from the agencies.

A major goal of the Center is to support research, education and the transfer of technology in the field of transportation. With this in mind, we will continue to foster productive dialogue with our members and interested parties who have a stake in transportation issues.

Camille Kamga, Ph.D.
Acting Director

NEWS & NOTES

UTRC Awards 10 AITE Scholarships

The Advanced Institute for Transportation Education sponsors the AITE Graduate Scholarship to attract bright people to careers in transportation and to encourage practicing professionals to stay current in the field and increase their expertise. For this academic year, 2010-2011, ten new scholars were accepted into the program. Among those awarded were employees of NYSDOT and NYCT and students at Rutgers, SUNY Albany, Polytechnic Institute of NYU and SUNY Maritime.

Financial support up to a value of \$25,000 dollars is available for outstanding full-time Masters students in transportation programs at one of six consortium participating universities. The scholarship provides tuition from the university matched by UTRC for full time students. Tuition up to a value of \$12,500 is also provided for practicing professionals and, in addition, the employed AITE scholar is awarded 10 hours per week paid work release time at the participating transportation agency.

For more information on the program follow <http://www.utrc2.org/education/aite.php>



Provided

During Max Zhang's survey of diesel vehicles in Beijing, this truck was a top-five heavy emitter of the pollutants carbon monoxide and black carbon.

[appendix](#) to read the full article which appeared recently in the Cornell Chronicle. To view Dr. Zhang's paper co-authored by Xing Wang, Dane Westerdahl, Ye Wu, Xiaochuan Pan, "On-Road Emission Factor Distributions of Individual Diesel Vehicles In and Around Beijing, China", **click** <http://dx.doi.org/10.1016/j.atmosenv.2010.09.014>.

Professor Max Zhang Studies On-Road Emissions in Beijing

Ke Max Zhang is an Assistant Professor of Mechanical and Aerospace Engineering at Cornell University. His research specialties include the impacts of congestion on air quality, sustainable energy systems, and nanoparticle pollution. These very same issues were recently thrust into the international spotlight after stories of a 62 mile, nine-day traffic jam in Beijing circulated worldwide this past August. Dr. Zhang's timely study, published recently in the Journal of Atmospheric Environment, identified "heavy emitters" following a field study of diesel engine trucks. Dr. Zhang's "tool of choice (was) a mobile laboratory -- a set of fast-response instruments that hang out of a minivan's window. For six straight day (Zhang) and his research team, literally chased vehicles while measuring the emissions in their wake". See the

UTRC 2010 Education and Technology Transfer Program

UTRC is pleased to disclose the selection results for its Education and Technology Transfer Program. UTRC extends its appreciation to the entire faculty that have participated and made this program a success.

2010 UTRC Projects Selected for Funding

Grant Recipient	University	Project Title
Kenneth English Kevin Hume	SUNY Buffalo	Using Transportation System Simulation to Engage Math and Science Learners
David King Elliott Sclar	Columbia University	Sigurd Grava Memorial Symposium of NY Metropolitan Area Transportation Professionals and Researchers
Yusuf Mehta	Rowan University	Polymer Modified Binder Technology Transfer Workshop
Anthony Shorris Marta Panero	New York University	Policy Conferences Collaboration
Patrick Szary	Rutgers University	Transportation Choices for Individuals with Autism

Benefits of UTRC Study Acknowledged by Newsday

October 6, 2010 Newsday ran the editorial “Intermodal Terminals Would Cut Truck Traffic”. In it Newsday not only cites the UTRC study, “Consideration of Potential Intermodal Sites for Long Island” conducted at the request of NYSDOT, they also acknowledge and advocate for intermodal freight facilities, offering real support to regional transportation planners. For the full editorial see [appendix](#).

For more information on the NYSDOT sponsored UTRC research project, please direct inquires to commentsli@utrc2.org.

“The thundering, road-killing, fume-spewing, never-ending line of trucks on our roads is only going to get worse, unless we get more of our goods to arrive here by rail.”

In The News

On September 24, the New York Times printed an op-ed piece “Vans on the Run”, jointly written and submitted by UTRC’s Director Emeritus, Robert Paaswell, and UTRC Consortium PI Elliott Sclar, Director of the Center for Sustainable Urban Development at the Earth Institute at Columbia University. In it, they discuss the dangers of allowing private interests to operate and provide service to passengers impacted by recent MTA service cuts. And that while allowing vans to operate along discontinued MTA Bus lines meets short term needs, it could endanger dedicated long term public service. They raise the point that these stopgap measures could incur significant social costs and should not

be seen as a solution to address the consistent lack of reliable funding streams to support the MTA. The piece sparked some industry debate with a letter in reply from NYC’s current TLC commissioner, David Yassky, who asserted the benefits of the privately operated group-ride van program and the passenger service they provide to those who would have been left with no alternatives after the cuts. To view their opinion, click here

<http://www.utrc2.org/aboutus/assets/Op-Ed-Contributors.pdf>



**“It’s a bad idea
to privatize
New York City
bus lines.”**

Also, in the Daily News, Dr. Paaswell was one of 5 regional experts asked to grade MTA CEO Jay Walder on his performance following his first year in the position. Subjects ranged from finance, labor relations and technology. Most awarded Walder As and Bs, but there was some disagreement as the headline read “MTA Chief’s Report Card: Lots of A’s & B’s - & 2 big fat F’s for Chairman Jay Walder “. To see subjects and grades, click here <http://www.utrc2.org/aboutus/assets/Mta-Chief Card.pdf>

Continued on Page 5

Continuing to emphasize the importance and necessity of 24 hour reliable transit service to maintain the region's global economic competitiveness, Dr. Paaswell delivered his points during an on-air segment on NBC New York. Chuck Scarborough interviewed the UTRC Director Emeritus and former CEO of the Chicago Transit Authority, about how to fix the MTA. With fair fares, as he elaborated, "users aren't paying their fair share to ride the system".

See more at http://www.nbcnewyork.com/station/as-seen-on/MTA_Budget_Crisis_New_York.html.



Chuck Scarborough talks with Robert Paaswell, UTRC Director Emeritus, about how to fix the MTA.

UMDNJ Team Gives Back to

A team of public health specialists at the University of Medicine and Dentistry of NJ have successfully conceived and implemented a pedestrian safety project designed to shrink the number of children struck by vehicles and rushed to University Hospital in Newark, NJ which sees more than 100 injured children every year. With funding from a variety of foundation and government grants, the team developed the "Pedestrian Injury Prevention Partnership" which includes a school assembly program in the city that works to educate children and raise awareness of the dangers of oncoming traffic. From teaching kids to look "left-right-left", to quickly filling empty crossing guard posts to even utilizing a portable fence to corral kids to the corners, the



Pictured here are Dr. David Livingston, Head of the Trauma Unit at UMDNJ... with him are Sharon Clancy, Coordinator of Grants and Communications, left, Dawn Snyder, Pediatric Pedestrian Health Educator, left-center, and Iesha Suber, Injury Prevention & Outreach Coordinator."

Continued on Page 6

program has recently observed some 95 percent of the children walking to the corners before trying to cross the street. In addition, the program ensures that all public and private interests collaborate to improve conditions.

For the full article appearing in the Star-Ledger, NJ's largest newspaper, click here http://blog.nj.com/njv_bob_braun/2010/09/newark_health_specialists_run.html

Pucher's Research Brought to Foreground in NJ and Region

The work of Dr. John Pucher has become increasingly relevant and directly applicable in this age of sustainability for necessity. **Professor of Urban Planning and Policy Development and Research**



Associate at Alan M. Voorhees Transportation Center, at Rutgers University, Dr. Pucher's work has been sought after to highlight and raise awareness of the benefits of walking and biking. His research is designed to support the role of cycling and walking in, not only transportation and infrastructure planning and policy, but also as a means to improve the health of Americans and fight obesity. "Life Cycling" was an on-air NJN News HealthWatch segment which discussed the importance of integrating biking into the cycle of trips individuals and families take. In addition, his work was also featured on the front page of a recent Sunday edition of the Bergen Record. Both can be accessed at [NJN](#) and [Bergen Record](#). Other examples of his work and work he has conducted jointly with colleagues has appeared most recently in such Journals as *World Transport Policy and Practice*, *Preventive Medicine*, *International Journal of Sustainable Transportation*, *American Journal of Public Health*, *Journal of Transport Geography*, and *Transport Policy*.

For a full citation of Prof. Pucher's work see [appendix](#).

Thoughts on Bob Olmsted

"I have known Bob for many years as a colleague and friend. In his own unassuming way he has made important contributions to transportation especially in the New York City area. He had unparalleled knowledge of the City's subways, bridges, tunnels and transportation history. We will all miss him."

May his memory be a blessing,

**Thoughts from
Herb Levinson,
UTRC Icon Mentor**

Robert Olmsted's dedication and contributions to the field of transportation will be greatly missed. Bob's level of commitment continued as he worked as a transportation consultant even after retirement. He began his professional career in transportation 60 years ago as a junior civil engineer on the construction of the Brooklyn Battery Tunnel. Prior to that, he served in the Army in World War II and received his civil engineering degree from Cornell University in 1946. From his work on the Brooklyn Battery Tunnel, he moved on to the Port Authority and then left the public sector to work for a major consulting firm. He returned to public

transportation in 1962, when he joined the staff of the New York State Office of Transportation which laid the groundwork for creation of the MTA, where he worked from 1967 until his retirement in 1989. After his retirement he continued working with Parsons Brinckerhoff, URS, and DMJM+Harris. He was active in the American Society of Civil Engineers where he was awarded the 2004 Civil Engineering History and Heritage Award.

For Bob's full biography see [appendix](#).

New Leadership at NYU's Rudin Center



Dr. Mitchell L. Moss

The Rudin Center for Transportation Policy and Management at NYU's Wagner Graduate School of Public Service is pleased to announce that Prof. Mitchell L. Moss has been appointed Director of the Center. Professor Moss served as Director of NYU's Taub Urban Research Center from 1987 to 2003, where he directed research projects for the National Science Foundation,

U.S. Department of Commerce, and US Department of Homeland Security. He has written extensively on the role of technological change in urban and regional development and his essays have appeared in The New York Times, New York Post, New York Daily News, and New York Observer. Professor Moss has been on the faculty of NYU since 1973. The Rudin Center and UTRC wishes former Director Anthony Shorris all the best in his new position as Senior Vice-President, Vice Dean and Chief of Staff at the NYU Langone Medical Center.

The Rudin Center also welcomes other new staff including Andrew Mondschein, Research Scientist and Associate Editor of the forthcoming *Journal of Transportation and Society*, Anthony Townsend, Visiting Scholar-in-Residence, and Elizabeth Nguyen, Program Administrator.

For more information about the Rudin Center, follow <http://wagner.nyu.edu/rudincenter>

UTRC Congratulates Howie Mann

Howie Mann has been named Staff Director of the Nassau/Suffolk Transportation Coordinating Committee (TCC). Mann's NYMTC career first began in 1983. Over the years he has, as Howie reflected, been able to take part in every aspect of the MPO functions, except one. The missing one, he explained, was project programming, which he will now have the opportunity to perform. He went on to note that the planning and programming aspects of the MPO are significant since as Howie explained "that is how projects are brought to fruition" As TCC director, he will be responsible for MPO services and outreach to member agencies from

Nassau and Suffolk and to local governments. His role as coordinator of the Regional Freight Plan will continue, which includes an update set to begin next spring. In addition, he will continue to oversee the nearly complete NYMTC/UTRC funded Freight Villages Study and will remain project manager of the Hudson River Valley Greenway Link study.

For a more comprehensive account of Howie's UTRC interview, please see [appendix](#).

For more information on UTRC's Freight Villages study, please follow

<http://www.utrc2.org/research/projects.php?viewid=119>.

Staff News from UTRC

Ms. **Nadia Aslam** has been promoted to Research Associate upon her recent graduation from CCNY with her Master's of Public Administration. Nadia has been with UTRC for more than 3 years providing excellent administrative support.. Previously, Nadia received her Bachelor's degree in Biochemistry from CCNY where



she also worked as a research assistant in the Sophie Davis School of Bio-Medical Education at CCNY. More recently, as a policy analyst intern with the Law & Justice Center, she conducted research on the NYC Juvenile System and analyzed data retrieved from the New York Civil Liberties Union (NYCLU). In addition,

some of her transportation-related research topics were

traffic congestion, airport flight delays and the NYC Transit System. Congratulations Nadia!

UTRC welcomes **Dr. Anil Yazici** to our staff. Anil holds B.S. and M.S. degrees in Civil Engineering from Bogazici University, Istanbul, Turkey, and an M.S. in Operations Research from Rutgers. Most recently Anil has received his Ph.D. in Civil & Environmental Engineering also from Rutgers University. Before joining UTRC, Anil has worked on research projects funded by PANYNJ, USDOT, NJDOT, NYSDOT and U.S. Homeland Security. His past research experience covers areas of congestion pricing, incident

Continued on Page 8



management, emergency evacuation modeling and stochastic dynamic traffic assignment. Anil is the recipient of the Transportation Coordinating Council/Federal Transit Administration Fellowship Award (2008-2009) and the NJDOT Bureau of Research Outstanding Student Award (2008). At

UTRC he will focus on research topics related to public transportation and transportation sustainability.

UTRC FACULTY PROFILE

**In this issue, UTRC begins a new newsletter feature, the Faculty Profile. In each subsequent issue, one faculty member from each consortium university (in alphabetical order) will be recommended and profiled.*

Anil Agrawal

Anil Agrawal is a Professor of Civil Engineering at the



City College of the City University of New York. He received his Ph.D. in Civil Engineering from the University of California,

Irvine, in August 1998 and joined the City College of New York in September 1998. Professor Agrawal has a long-standing and productive relationship with UTRC and has been the principal investigator on five research projects facilitated by UTRC for NYSDOT on bridge inspections and vehicle impacts, load and resistance factor ratings and seismic design. In addition, he chaired the UTRC workshop on "Safety and Behavior of Bridges Subjected to Blast in a Multi-hazard Environment" co-sponsored by FHWA, NJDOT and NYSDOT and attended by more than 100 researchers, engineers, and practitioners from around the country. Dr. Agrawal's research interests include structural response control, smart materials and intelligent structures, earthquake and wind engineering and effects of blast loads on buildings. Just this past September, Professor Agrawal was called upon and quoted in the New York Post following a gas pipe explosion in San Francisco which killed four individuals. He cautioned that "What happened in California is not unthinkable in New York. Our piping



UTRC is pleased to have **Abhishek Singhal** join our staff as well. Abhishek is currently pursuing his PhD in Transportation Engineering at CCNY. At UTRC he will provide research assistance in areas such as Intelligent Transportation Systems, Smart Cities and Sustainable growth, Transportation Safety

and Systems Engineering Development & Integration. Abhishek has received his B.E. in Electronics Engineering in 2004 from Pune University, Pune, India and his M.E. in 2009 in Electrical Engineering (Telecommunications) from CCNY. His experience includes time at the Structural Engineering Laboratory, Indian Institute of Technology Kanpur, and he has been actively involved in research projects for NJDOT, DEP and NYCDOT. For more information, please visit his website:

<http://sites.google.com/site/abhisheksinghal4u/home>

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Continued on Page 9

infrastructure is very, very old. The biggest problem is we really don't know their condition. We only know about them when there is breakage. We just fix the breakage and wait for the next failure."

Follow the link to view the entire article, "New York's Old Gas Lines Could Explode Like Pipe Near San Francisco" at http://www.utrc2.org/aboutus/assets/NY_gas_pipeline.pdf.

Professor Agrawal is currently the Chief Editor of the ASCE Journal of Bridge Engineering, a member of the executive committee of the U.S. panel of the International Association of Structural Control and Monitoring, and chair of the ASCE committee on Structural Control. In 2012, he will chair the Analysis and Computation Conference in Las Vegas, Nevada, and in 2011 chair an ASCE Committee on Bridge Inspection, Management, and Rehabilitation. He has published more than 46 journal papers and 100 conference papers in the areas of smart structural systems, structural control, structural dynamics, and seismic analysis of Bridges and blast loads on bridges and other diverse areas of bridge engineering. Click [here](#) to learn more.

RECENT EVENTS

Visiting Scholar Seminar Presented by Rod Diridon



Rod Diridon
Executive Director
The Mineta Transportation Institute

On October 1st, Rod Diridon presented "High Speed Rail: The Fast Track to Sustainability" to the UTRC audience. Dr. Diridon is the executive director of the Mineta Transportation Institute and is a national and international expert in the field. His seminar examined and demonstrated how implementation of high speed rail can be utilized to meet sustainability goals. Advances of premiere international high speed rail systems were presented along with the progress of California's high speed rail efforts and accomplishments. Finally, challenges and barriers of high speed rail projects in the US and the NY regional were discussed and debated.

To view his presentation and for more information, please follow <http://www.utrc2.org/events/events.php?viewid=274>

September 11th Memorial Program Completes 5th Year

The idea for the Academic Initiative of the September 11th Memorial program was conceived as a living memorial to the three NYMTC employees who perished on Sept. 11th – Ignatius Adanga, Charles Lesperance, and See Wong Shum. Staff, NYMTC members and family members joined together to develop a memorial that would live on in their memories. In 2005, an overseeing body was formed consisting of four subcommittees: Academic, Planning, Finance and Public Awareness. The group then convened to choose student applicants for the 2005-06 academic initiative. Since that time, the rigorous application process has become increasingly more competitive over the years with 65 applications over the course of the five year program. Of these, 22 were accepted. Students receive stipends funded by NYMTC and UTRC, tuition reimbursement at UTRC consortium

The Academic Initiative of the September 11th Memorial Program for Regional Transportation Planning concluded its fifth year as this year's recipients presented their research results.

Continued on Page 10

members, and/or placement in a public agency internship. Over the course of the program, several agency internships have been completed at such NYMTC member agencies as NYC DOT, MTA Capital Construction, the Port Authority of NY & NJ, and the Westchester County Departments of Transportation and Planning. Recipients of the program's 5th year presented their work recently to the NYMTC audience. Students and the subject of their research are listed below.

Haiyun Lin, Ph.D. candidate CCNY presented the results of her work on "Improving the Residential Location Model for the New York Metropolitan Region."

Sandra Rothbard, NYU Wagner, reported on her internship at the PANY&NJ and her study "Promoting Community Involvement in Freight Decision-Making: A Resource Guide for the Port Region of New York and New Jersey."

Judd Schechtman, Ph.D. candidate, Bloustein School at Rutgers presented his research, "Is Sprawl Still the Law? Linking Land Use Law and Transportation Planning for Building the Green Metropolis."

Alex Wolk, NYU Wagner, an intern at NYCDOT presented his work on a Bus Management Plan for Lower Manhattan.



(From left to right): Sandra Rothbard, Judd Schechtman, Penny Eickemeyer (UTRC), Haiyun Lin, and Alex Wolk

For more information on the Sept. 11th Program or for details of student research, please follow <http://www.utrc2.org/education/911memorial.php>



UTRC Hosts First US Meeting of the Taxi Research Network

On September 23rd, UTRC hosted visiting researchers and international taxi experts, Dr. James Cooper, Edinburgh Napier University and Wim Faber, Editor-in-Chief at Magazine Personenvervoer. UTRC Distinguished Lecturer and former NYC TLC Commissioner, Matthew Daus, moderated the afternoon panel discussion and subsequent debate. The event was also co-sponsored by the International Association of



Transportation Regulators (IATR). UTRC was pleased to facilitate this first US meeting of the Taxi Research Network. UTRC, through its notable consortium of researchers, was able to provide an objective forum for building networks, fostering multi-disciplined synergies and creating awareness of this indispensable yet often overlooked mode of travel. One of the goals of this event and of this Network is to build upon a growing group of academics and professionals interested in conducting collaborative research addressing issues of and barriers to incorporating the taxi cab into mainstream transportation planning and research. UTRC Acting Director Camille Kanga and UTRC Distinguished Lecturer, Matt Daus, in particular, have been working to strengthen ties with this industry. They have presented the UTRC program at the 23rd Annual Meeting of the IATR in Chicago and also at the World Conference on Transport Research in Lisbon, Portugal, both occurring earlier this summer. Here David Strickland, Administrator of the National Highway Traffic Safety Administration awards Matt Daus at the IATR annual meeting.

Continued on Page 11



For more information and to view the recorded webcast follow <http://www.utrc2.org/events/events.php?viewid=276>. For information on the Taxi Research Network, follow http://www.taxiresearch.net/www.taxiresearch.net/Taxi_Research_Network.html



(From L to R): José Holguín-Veras – Professor, Rensselaer Polytechnic Institute, Camille Kamga – Acting Director UTRC, Nadia Aslam – Research Associate, UTRC, and Danielle Petretta – Assistant Director for Technology Transfer, UTRC

2010 Transportation Summit

The 2010 Transportation Summit held on September 24th brought together top leaders of federal, state and local public agencies as well as top executives in private industry to discuss major infrastructure and development initiatives in New York State. The conference was designed to improve dialogue and to initiate discussions on how New York's transportation plans might be financed and where new business opportunities might be created. The Agenda for the day also provided a platform for participants to explore public private partnerships models that could take NY into its next decade of growth and beyond. UTRC was among the meetings co-sponsors including McGraw Hill, NYSDOT, MTA, PANY&NJ, the NY Thruway Authority and RPA. Dr. Camille Kamga chaired a panel on "innovation" and Dr. Paaswell gave the morning keynote address where he urged participants to focus on priorities, resources and setting a vision. He went on to stress that "above all else, (we must) reinforce the fact that NY State is vibrant and will remain the major player in global competitiveness, while maintaining a high quality of life for its citizens and its visitors." For more information follow <http://navigatingopportunities.com/dot/index.html>.



(From L to R): Michael R. Fleischer, Executive Director - New York State Thruway Authority, Robert E. Paaswell – Director Emeritus, University Transportation Research Center, and Stanley Gee – Acting Commissioner, New York State Department of Transportation

Research News

AIRPORTS: 21st Century Makeovers for the New York Metro Region

UTRC was proud to co-sponsor “AIRPORTS: 21st Century Makeovers for the New York Metro Region” held last June with the Steven L. Newman Real Estate Institute, the CUNY Aviation Institute and the Port Authority of New York and New Jersey. The interdependence of the health of our airports and the health of our economy was underscored throughout the day by conference speakers including top officials from the FAA, the PANY&NJ, aviation executives and other experts. The need to proactively manage dramatic growth, minimize risk, boost efficiency, reduce environmental impacts while upgrading to NextGen is an absolute requirement to maintain the region’s global economic competitiveness. Susan Baer, Director of Aviation at the Port Authority wrapped up the day by suggesting several action items to build support such as joining the National Alliance to Advance NextGen and the Better Airports Alliance and to forward improvement suggestions to myidea@panynj.gov. Watch for another meaningful conference on this topic in 2011.

<http://www.panynj.gov/airports/nextgen-sign-up.cfm>
<http://www.betterairportsnynj.com/>

Center for Secure and Resilient Maritime Commerce Hosts Summer Research Institute

The Center for Secure and Resilient Maritime Commerce (CSR) at the Stevens Institute of Technology held its first annual Summer Research Institute this past June and July. Twenty-six students with diverse backgrounds participated in the intensive eight-week summer research program designed to encourage innovative research and novel approaches to maritime security issues. The program, funded by the Department of Homeland Security and run by CSR, included 11 graduate and 15 undergraduate students studying disciplines ranging from biology to criminology to

engineering. Over the course of the program, students were able to interact with maritime practitioners and industry and government representatives through in-class lectures and field trips to learn first hand the complexities in securing our nation’s inland waterways and ports. Read more in [appendix](#).



Rowan Presents High RAP Technology Transfer Workshop

Under the direction of Dr. Yusuf Mehta, Professor of Civil and Environmental Engineering, at Rowan University, a research team conducted the High RAP



Technology Transfer Workshop on March 18th, 2010 at the South Jersey Technology Park at Rowan. The program was funded in part through UTRC’s Education

Continued on Page 13

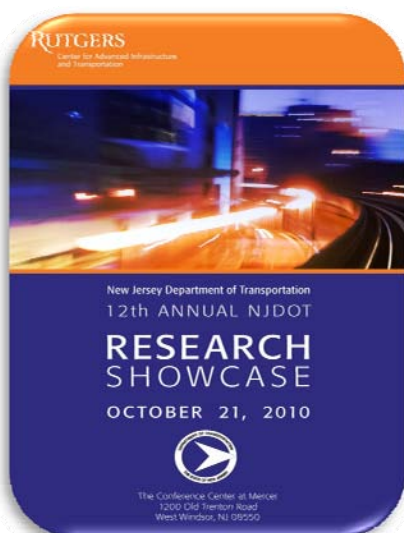
and Technology Transfer Program. The workshop was attended by 40 representatives from Delaware DOT, New Jersey DOT, New Jersey Turnpike Authority, New Jersey Asphalt Paving Association, Federal Aviation Administration, Federal Highway Administration, consultants, and contractors in the region. The workshop was a great success in that the research results were disseminated to all stakeholders, rather than only select research customers. The Rowan team received much positive feedback as well as requests to hold more workshops in the future.



(From left to right): Camille Kamga, Acting Director, UTRC - Penny Eickemeyer, Assistant Director for Program Management, UTRC, and Peter H. Appel - Administrator, Research and Innovative Technology Administration (RITA)

Photo by Steve Goodman

NJDOT Research Showcase



The NJDOT Bureau of Research held its 12th Annual Research Showcase on October 21, 2010. The Showcase offers an opportunity for NJDOT customers to experience the broad scope of ongoing research initiatives, technology transfer activities, and academic research being conducted by

university research partners and their associates. Research was highlighted in presentations, poster sessions and displays. The program was sponsored by the NJDOT Research Bureau with assistance from Rutgers' CAIT-NJ LTAP.

For additional information please visit the event site at <http://cait.rutgers.edu/cait/12th-annual-njdot-research-showcase>

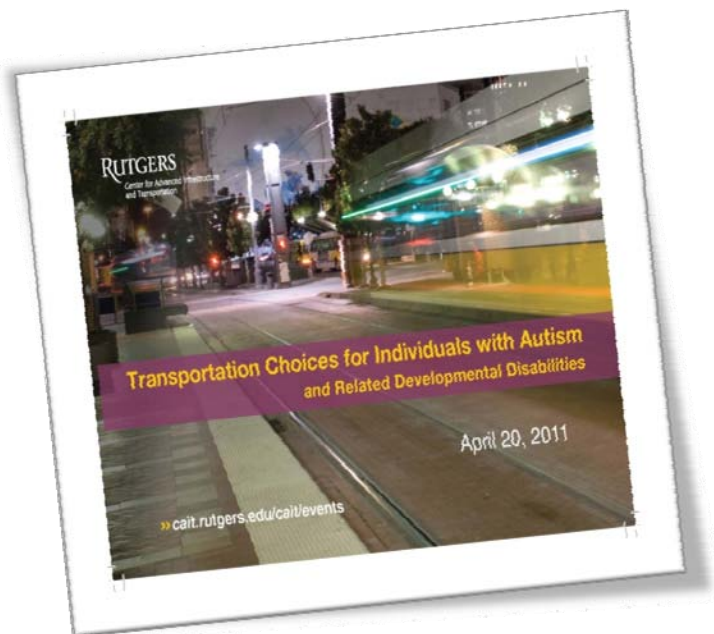
Complete Streets Summit

The New Jersey Department of Transportation and the Voorhees Transportation Center, with funding from FHWA hosted the **NJ Complete Streets Summit** on October 22nd. The event was also co-sponsored by the NJ Chapter of the American Planning Association and the Metropolitan Section of the Institute of Transportation Engineers. The summit educated engineers, planners, and elected officials about Complete Streets, its benefits and costs, and how to overcome barriers to implementing a Complete Streets policy. The Complete Streets Program is designed and operated to enable safe access for all users - pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Topics included an introduction to Complete Streets, its policies and supporting processes, design and planning, cost and funding, and liability.

For more information, follow <http://policy.rutgers.edu/vtc/bikeped/completestreets/summit.php>.

UPCOMING EVENTS

Transportation Choices for Individuals with Autism



On April 20, 2011 the Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University will hold a one-day conference co-sponsored by UTRC on “Transportation Choices for Individuals with Autism and Related Developmental Disorders”. The conference is designed for educators, transition coordinators, and adult support staff, to introduce a range of transportation options that can be embedded in current educational and life skills programming. The goal of this conference is not only to help facilitate technology transfer, but also to promote a dialogue between service providers and the needs of the developmentally disabled community, who are often under-utilizing existing transportation infrastructure. For more information and to register, click here <http://cait.rutgers.edu/cait/transportation-choices-individuals-autism-and-related-developmental-disabilities>

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Thinking and Doing Breakfast Series- Fall 2010

The Rudin Center for Transportation Policy and Management at NYU’s Wagner Graduate School of Public Service will continue its successful Thinking and Doing Breakfast Series. This policy series seeks to pair current policy leaders and practitioners with top academic thinkers to discuss challenging transportation topics and to bridge the gap between theory and practice. The program, developed and implemented by the Rudin Center and co-sponsored by UTRC, continues this fall with the following seminars:



Sept. 29: NYCDOT Commissioner Janette Sadik-Khan, real estate developer Douglas Durst and Professor Vicki Been

Oct. 20: MTA Chairman Jay Walder and Professor Mitchell L. Moss

Nov. 4: HUD Regional Administrator Adolfo Carrión

To RSVP and for more information please follow <http://wagner.nyu.edu/events/thethinkinganddoingbreakfastseriesfall2010>

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New Thinking on Transportation and Society: Doctoral Research Series

This series, also developed and implemented by the Rudin Center with support from UTRC, provides an informal setting for the nation's leading young scholars to present their current dissertation research on cutting-edge transportation matters. Students from institutions such as MIT, UC Berkeley and Rutgers present work chosen through a nation-wide competition. The following presentations are planned for this fall:

Oct. 25: Cuz Potter, Columbia University: "Boxed In: How Intermodalism Enabled Destructive Interport Competition".

Nov. 18: Camille Fink, UCLA: "The Presentation of Self in Everyday [Transit] Life: An Ethnographic Study of Los Angeles Bus Culture".

Dec. 10: Eric Morris, UCLA: "Access and Outcomes: Transportation, the Urban Environment, and Subjective Well-Being."

RSVP at <http://wagner.nyu.edu/events/newthinkingontransportationandsocietydoctoralresearchseries>

Airports as Engines of Economic Development

When NYU was established at Washington Square, New York was the new world. Now it is a mature city, and Abu Dhabi, a youthful, growing metropolis, is the new world. However different, the cities face common challenges that the "NYU Abu Dhabi Lecture Series" will explore. Underscoring the twin focus, speakers will deliver talks in both New York and Abu Dhabi and address the circumstances in each city. On November 8th, R. John Hansman Professor of Aeronautics and Astronautics at the Massachusetts Institute of

Technology will present "Trends in Air Transportation: Implications for New York and Abu Dhabi". The lecture will be held at 6:30 pm on November 8th at the Events Space, 19 Washington Square North. For more information follow <http://nyuad.nyu.edu/news.events/nyc-ny-ad.futures.2010-11.html>

RESEARCH HIGHLIGHTS AND PUBLICATIONS

Three UTRC Sponsored Research Studies Conclude

The study, "Controlled Composite Action To Eliminate Transverse Cracking in Concrete Bridge Decks", was conducted by PI- M. Ala Saadeghvaziri, Professor in the Department of Civil and Environmental Engineering, New Jersey Institute of Technology Newark, NJ.

Tens of thousands of bridges in the US develop transverse deck cracking due to concrete shrinkage causing accelerated corrosion, increased maintenance costs, water leakages and aesthetic impacts. Many researchers have tried to tackle this problem to date by focusing on changes in design and construction

techniques, this study focused instead on the possibility of controlling the composite action, referred to as C²A, of a superstructure during the early stages of concrete shrinkage by postponing the composite action until after the majority of shrinkage has occurred. Results indicated that C²A in its preliminary form may not guarantee elimination of transverse deck cracks. For specifics, please refer to the final report at <http://utrc2.org/research/projects.php?viewid=154>.

Another final report submitted recently was from PI Thomas Bennert entitled "Performance of Gravel Aggregates in Superpave Mixes with 100/95 Angularity," conducted by PI Thomas Bennert of the Center for Advanced Infrastructure and Transportation at Rutgers University. This study evaluated the performance of the Hot Mix Asphalt (HMA) of various

Continued on Page 16

crushed gravel and stone and corresponding face counts as determined by an existing Superpave specification known as ASTM D5821, *Percent of Fractured Particles in Coarse Aggregate*. Previously, NYSDOT was able to lower their requirement from 100/100 angularity to 100/98 and had requested a study to determine if the angularity could be further reduced without forfeiting necessary strength, stability and quality condition of high volume roads. For additional detail and conclusion of the study, please refer to the final report at <http://utrc2.org/research/projects.php?viewid=144>.

A third completed project, “**Understanding Residential Location Decision in the New York Region- A Data Collection Effort.**” was prepared by PIs Cynthia Chen, Department of Civil and Environmental Engineer, University of Washington, Hongmian Gong, Department of Geography, Hunter College, CUNY, and Haiyun Lin,

Ph.D. student at the City College of New York, CUNY. The purpose of this project was to collect data to answer two specific questions. They were: 1. How do people’s prior residential location experiences influence their current residential preferences? And 2, How do people search in space for a residential location? Data collected included household socio-demographic characteristics, all prior residential experiences and attitudes, perceptions of actual house characteristics and the motivation and information sources used in housing searches. The PIs of this project are currently leading a team to analyze the collected dataset and apply more rigorous analyses to determine more conclusive answers to the two questions framing this study. Please see final report at <http://utrc2.org/research/projects.php?viewid=157>.

UTRC Facilitates NYSDOT and NJDOT Research Needs

Six new research projects were facilitated through UTRC and were sponsored by NYSDOT and NJDOT. Please visit <http://utrc2.org/research/projects.php> for more information. The research topics and principal investigators are listed below.

1. ***Integrated Vegetation Management Program Enhancements: NYSDOT***

PI: Christopher Nowak, Associate Professor of Forest and Natural Resource Management at the State University of New York College of Environmental Science and Forestry

2. ***Potential Tidal Power for New Jersey: NJDOT/RITA***

PI: Hansong Tang, Assistant Professor of the City College of New York along with Mr. Roger Bason as sub-consultant, from Natural Currents Energy Services, LLC, Highland, NY. See also <http://www.nbcnewyork.com/news/local-beat/Tidal-Power-Almost-Ready-for-Prime-Time-96351709.html>.

3. ***Mobile Source Air Toxics Mitigation Measures: NYSDOT/RITA***

PI- Marta Panero, Deputy Director, Rudin Center for Transportation Policy and Management, NYU

4. ***Nighttime Highway Construction Illumination: NYSDOT***

PIs- Mark Rea, Professor of Cognitive Science and Director, Lighting Research Center, Rensselaer Polytechnic Institute and John Bullough, Lighting Scientist and Adjunct Assistant Professor, Lighting Research Center

5. ***Determining Binder Flushing Causes in New York State: NYSDOT***

PI- Dr. Thomas Bennert, Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University.

6. ***Grade Determination of Crumb Rubber- Modified Performance Graded Asphalt Binder: NYSDOT***

PI- Dr. Thomas Bennert, Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University

Pilot Test Results Released in Study of Freight Demand Management

A team of UTRC Consortium PIs, including Dr. José Holguín-Veras (RPI), Dr. Kaan Ozbay (Rutgers), Dr. Alain Kornhauser (Princeton), Anthony Shorris (NYU) and Dr. Satish Ukkusuri (Purdue) recently released USDOT the results of their pilot test which was conducted as part of their study “Integrative Freight Demand Management in the NYC Metropolitan Area”. The system tested is an integration of cutting edge GPS



Figure 1: Locations of the Participating Receivers

technologies, freight demand modeling, traffic simulation, and policy. Three retail franchises agreed to participate in the off-peak hour delivery Pilot Program; each for one month between October 2009 and January 2010. Benefits, in terms of increased speeds, decreased delivery and unloading time and even improvements to speeds of other road users were all recorded. It was noted that the participating companies were generally quite satisfied with the savings, and indicated that they'd be likely to request off-hour deliveries in the future. The authors derived that if an incentive policy of \$10,000/year in tax deduction to the retailers could result in substantial annual travel time savings and pollution reduction. The positive results of the program point to the potential for a shift toward off-peak urban deliveries, thus increasing the competitiveness of the urban economy, and reducing congestion and environmental pollution. See [appendix](#) for the detailed scenarios and results of the study.

Professor James Cohen to Publish in Journal of Transport History

James Cohen, Associate Professor of Public Management at the John Jay College of Criminal Justice will publish “Public Credit, Private Capital and the Decline of American Railways, 1840-1940.” In his account, Professor Cohen details how American Railways ultimately declined due to the burdens of excessive debt and the growing competition from cars, buses and trucks, as opposed to the more generally attributed causes of excessive government regulation and failed corporate management. The weaknesses of these explanations, as chronicled by Prof. Cohen, is that they ignore the ways in which private control of the planning and financing of railway development, combined with unprecedented interventions of the US government during the Great Depression, contributed to railway decline. Professor Cohen points to rarely used archival sources which provide much of the evidence for this argument. For full abstract see [appendix](#).

Jean-Paul Rodrigue Researches Logistics, Freight Distribution, and Intermodal Performance

Jean-Paul Rodrigue,

Associate Professor in the Department of Global Studies and Geography at Hofstra University, has recently published a number of papers in the *Journal of Transport Geography* and the *Journal of the Transportation Research Forum*, plus has written numerous book chapters, encyclopedia articles and commissioned reports including "Comparative North American and European Gateway Logistics: The Regionalism of Freight Distribution", "Intermodal Terminals, Mega Ports and Mega Logistics" and



Continued on Page 18

He has presented his research recently at the international conferences of the International Association of Maritime Economics, Terminal Operators Conference and the International Transport Forum. He has also co-authored [The Geography of Transport Systems, 2nd Edition](#). His research focuses on economics and transport geography as they relate to freight distribution. Geographical area interests involve East and Southeast Asia (particularly China) and North America, notably matters concerning transportation, distribution and trade issues. Specific topics cover transport systems and logistics, global supply chains and production networks, gateways and transport corridors, urban regions, economic integration, international trade and regional development. To reference Dr. Rodrigue's recent works see newsletter [appendix](#).

Jonathan Muckell, Ph.D. candidate in the Department of Informatics at SUNY Albany, along with Drs. Jeong-Hyon Hwang. Department of Computer Science, Catherine T. Lawson. Department of Geography and Planning, and S. S. Ravi., Department of Computer Science, have developed technical solutions to address the difficulties of processing, querying, transmitting and storing the massive amounts of data generated by inexpensive GPS devices. Their work, “Algorithms for Compressing GPS Trajectory Data: An Empirical Evaluation” has been accepted at the 18th International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2010) to be held November 2-5, 2010 in San Jose, California. To overcome these difficulties, the team has proposed a number of algorithms for compressing trajectory data, while still preserving the quality of the information. A complete version of the paper is available as Technical Report SUNYA-CS-10-06. Compression results are depicted below. For full abstract, see [appendix](#).



RPI's Lighting Research Center Releases New Studies

Specifier Reports: Streetlights for Collector Roads



The National Lighting Product Information Program (NLPIP) of the Lighting Research Center (LRC) at Rensselaer Polytechnic Institute released its latest *Specifier Report*, designed to provide objective performance information on existing street lighting technologies including light-emitting diode (LED), induction, pulse-start metal halide (PSMH), and high pressure sodium (HPS) streetlights. This report comes at a critical time when many municipalities, some with funding from the American Recovery and Reinvestment Act of 2009, are in the process of replacing HPS streetlights with LED, induction and PSMH products. Published performance results are available online at www.lrc.rpi.edu/nlpip/publicationDetails.asp?id=927&type=1.

Lighting Answers: Dynamic Outdoor Lighting



NLPIP also released a publication from its *Lighting Answers* series that tackles specific questions about lighting products, systems, and subjects relevant to lighting decision makers. *Lighting Answers: Dynamic*

Outdoor Lighting addresses the factors most hindering greater use of dynamic outdoor and street lighting, which has the potential to reduce energy use and light pollution in parking lots, parking garages, outdoor walkways, and public roadways. This publication is designed to provide strategies for implementing dynamic outdoor lighting; explain the various technologies

available; and outline potential energy, environmental, and cost benefits, as well as potential drawbacks. The complete publication is available online at www.lrc.rpi.edu/nlpip/publicationDetails.asp?id=928&type=2.

Public Has Yet to Fully Embrace New Headlamp Technologies.

The latest report from the Transportation Lighting Alliance (TLA) at LRC evaluated newspaper articles published from 2004-2009 to locate, analyze and gauge opinions related to automobile headlamp visibility and glare. The information will be used to outline the main areas of concern in terms of headlamp safety and pinpoint areas for future study. TLA will use the information generated by this report, shown in the pie charts below, in future research to address the concerns and visual requirements of the driving public. The full report can be accessed at www.lrc.rpi.edu/programs/transportation/TLA/publicInformation.asp.

LRC Gets the Word Out

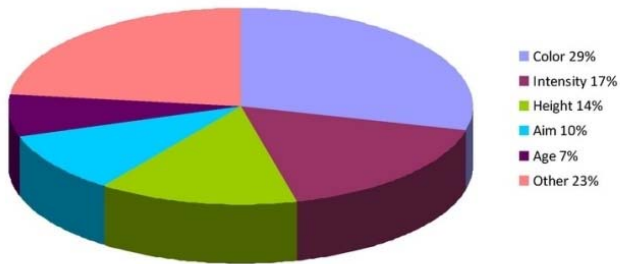
Results of a study on retroreflective sign visibility were recently published in the journal *Transport*. The results suggest that newly developed retroreflective materials were similarly legible to illuminated high way signs, at least in the piloted test urban location, the Gowanus Expressway. The full paper can be accessed at www.transport.vgtu.lt/en/lt/1/NR/27899.

In May, Jen Brons and John Bullough, Ph.D., from Rensselaer Polytechnic Institute's Lighting Research Center (LRC), along with Tom Kligerman from the New York State Department of Transportation (NYSDOT), presented on photovoltaic lighting at the New York State Association of Transportation Engineers 70th Annual Conference in Albany, NY. In addition, a brief overview of recent LRC research was also included, featuring similar case studies, light pollution calculations, light-emitting diode (LED) specifications, roadway luminaire and headlamp testing, and lighting for crosswalks, roundabouts, and work zones. Learn more about these projects at <http://www.lrc.rpi.edu/programs/transportation/index.asp>

For more detailed information from the Lighting Research Center, please see [appendix](#).

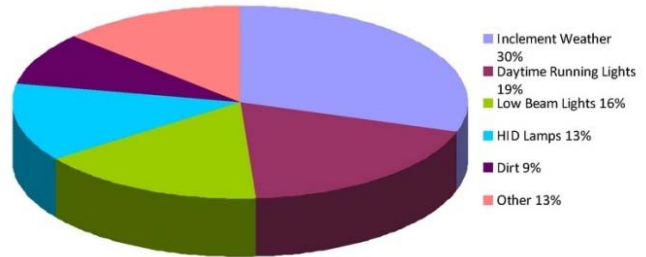
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Headlamp Glare



The top areas of concern in regard to headlamp glare were color, intensity, height, aim and age of the headlamps.

Visibility Concerns



The top areas of concern in regard to visibility were inclement weather, daytime running lights, low beam headlamps, HID headlamps and dirt buildup.

Professor Wakeman Published and Profiled in TR News

Professor Thomas Wakeman, Deputy Director of the Center for Maritime Systems at Stevens Institute of Technology, along with Michael Bomba, Senior Associate, Alliance Transportation Group, recently published “Maritime Freight Transportation, National

Economic Recovery, and Global Sustainability: Coordinating a Strategic Plan”. The article, featured in the July-August edition of *TR News - Globalization and Transportation: Changing the World*, recounts how shifts in regional and worldwide trade patterns “pose a dynamic challenge and point to the need for a strategic freight plan for the U.S. Marine Transportation System”. Issues, including intermodal transport capability, energy use, sustainability, and the effects of the expansion of the Panama Canal are addressed as well. A profile of Prof. Wakeman - attesting to his venerable career at the US Army Corps of Engineers, the Port Authority of New York and New Jersey and Stevens, and his expertise in port security, freight policy and intermodal transport - appeared as well. Please see the [appendix](#) for the *TR News* article and for Prof. Wakeman’s profile.



Researchers at the Voorhees Transportation Center Tackle Critical Issues

Researchers at the Alan M. Voorhees Transportation Center (VTC) located at the [Edward J. Bloustein School of Planning and Public Policy](#) at Rutgers, continue to address regional and national transportation issues centering around transportation and the built environment, transportation and social equity and transportation finance and the economy. Recently completed projects include Daniel Chatman's and Stephanie Di Petrillo's "Eliminating Barriers to Transit-Oriented Development" which looked at ten transit stations and investigated conditions that could be barriers to TOD including the impacts on schools, auto traffic and parking.

VTC is also a key partner in the Safe Route to Schools program and has developed the Safe Routes to School Resource Center. A recently completed study by Leigh Ann Von Hagen resulted in practical applications and revisions to school policies which encourage and support bicycling and walking. In this study, 165 schools and 24 school districts' policies were surveyed. They were able to create a model walking and bicycling policy that was detailed but that also allowed for modifications dependent on each individual community. An accompanying fact sheet about school policies and liability was also developed with assistance from the National Policy & Legal Analysis Network to prevent Childhood Obesity. This work has been presented at numerous conferences as well as webinar and training sessions. For instance, staff from the Safe Route to School Resource Center conducted a 'walking school bus' training session where parents, police officers, school administrators and community organizers were trained on how to structure a safe walking route, timetable and schedule to school.

In addition, VTC researchers including Jon Carnegie, Devajyoti Deka, Nicholas Klein, Robert Noland, have released numerous working papers on topics of intercity buses, immigrants and transit, safety and recidivism, TOD and property values and road construction emissions. Please see the [appendix](#) for VTC's full account of activities, new and ongoing research and recent publications [click here](#). [Click here](#) to link directly to the VTC website <http://policy.rutgers.edu/vtc>.



Employment Opportunities

Voorhees Seeks Two Research Project Coordinators II

The Alan M. Voorhees Transportation Center at Rutgers, The State University of New Jersey seeks qualified candidates to fill two project coordinator positions. The center's research portfolio includes projects that address a broad range of transportation planning and policy areas, including: transit-oriented development, bicycle and pedestrian transportation, transit planning, freight policy, human services transportation, transportation finance and transportation security. The project coordinators will provide project management and research support to the center's project managers and principal investigators on designated projects. Interested candidates should apply via the internet through the Rutgers University office of human resources at the following link: <http://uhr.rutgers.edu/jobpostings/>.

See the appendix for full employment listing including responsibilities and requirements.



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