



Institute for Transportation Research and Education
North Carolina State University

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FOR MORE INFORMATION:

Lisa Gullette, ITRE Communications Manager
(919) 515-8039; lisa_gullette@ncsu.edu

ITRE Researchers Present to 10,000

Raleigh, N.C. – Researchers at the Institute for Transportation Research and Education (ITRE) presented the results of their studies at the 85th Annual Transportation Research Board Meeting in Washington, D.C. last week. A record number of ITRE research papers was selected by the research board for presentation. The Transportation Research Board (TRB) is a division of the National Research Council, which serves as an independent advisor to the federal government and others on scientific and technical questions of national importance.

Dr. Nagui Roupail, director of ITRE, was co-author on six of the 13 research papers accepted this year. “I was very impressed with the caliber of the presentations by ITRE students and staff. Considering that this year's TRB registration exceeded 10,000 participants for the first time ever, visibility at that national and international event was crucial for many Centers and Institutes,” Roupail said, “Whether at regular or poster sessions, ITRE presentations were clear, elicited many questions and generally drew praise from the audience. We hope to continue and improve on our track record at TRB in the future.” In addition, while at the conference he accepted the award for “Best Paper by the Transportation Research Board (TRB) Committee on Operational Effects of Geometrics,” which nominated it for consideration for the prestigious D. Grant Michel Best Paper Award. The researchers were presented with a plaque and the paper will be published in the *Journal of the Transportation Research Board*.

The Center for Transportation and the Environment (CTE) at ITRE presented 2 research papers and were recognized for their contributions to the annual meeting. Senior research associate, Janet D’Ignazio’s, paper on the topic of linking land use planning and the indirect and cumulative impacts of transportation was characterized by the sponsoring committee as among the “best of the best” papers featured in the environmental analysis session. In addition, CTE senior research associate Leigh Lane was named the new chair of the TRB Subcommittee on Community Impact Assessment, following a competitive selection process. D’Ignazio feels that research presented at TRB will impact decision-makers in transportation. “ITRE research presented at TRB provides insights into how to improve air quality; identifies ways to improve planning for roads that can save time and money; and will help increase safety for cars, pedestrians and school children. This focus on research that addresses critical issues that face communities across North Carolina and the nation is a high priority for our organization,” says D’Ignazio.

Many of the ITRE staff attended the conference, although not to present research, but to have the opportunity to share knowledge and views with colleagues and to learn about the latest developments in transportation research, policy, and practice. Mary Meletiou, Bicycle and Pedestrian Program Manager at ITRE attended the Annual Meeting to participate in a Project Panel meeting with the Transit Cooperative Research Program of the Transportation Research Board, and Chris Cunningham, a Research Associate at the institute attended the Traffic Law Enforcement Committee meeting on which he serves. “The committee is concerned with enforcement issues related to excessive speeds on roadways,” stated Cunningham. This is one of the topics that Cunningham’s research touches. He presented his research, “Reasonable Speed Limits on Suburban Multilane Highways with Curbs” during a presentation session as well. Jeff Tsai, director of the Pupil Transportation Group at ITRE attended a subcommittee on School Transportation, which he serves as co-chair. “The hot topic this year for the subcommittee was the Safe Route to School Program managed by the FHWA,” states Tsai. This subcommittee was well attended by people representing multidisciplinary groups including professions from areas such as public health, air quality, regional planning, school bus, school districts, advocacy groups, professional associations, state and local departments of Transportation, and university transportation centers.

ITRE also supports students who were involved at TRB this year. Four students were contributing authors to the papers and a total of 6 participated in the conference. Bastian Schroedor, a Ph.D. student at North Carolina State University

Nagui M. Roupail,
Ph.D., Director

An inter-
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center
serving all
16 UNC
campuses.

Centennial Campus
Box 8601, Raleigh, NC 27695-8601
(919) 515-8899 ☎ (919) 515-8898 fax
<http://www.itre.ncsu.edu>



and researcher at the institute said that he enjoyed the meeting. “I got a chance to participate in several TRB committee meetings and greatly enjoyed the exposure to that aspect of the transportation profession.” In regards to the research he presented he continued by saying, “My presentation also had good attendance. The issue of crossing difficulties for blind pedestrians has been discussed quite frequently in past years, but this was the first time that somebody looked at the problem of blind pedestrians at channelized right turn lanes quantitatively. The research also illustrated the broader issue of general pedestrian crossings at these types of facilities. The collected data will further be very helpful in my own dissertation on modeling pedestrian-vehicle interactions at crosswalks using microsimulation.”

Liza Runey, also a student working at ITRE, was honored at the U.S. Department of Transportation's Annual Outstanding Student of the Year Awards dinner during the TRB Meeting. Runey also presented a poster session along with other Dwight David Eisenhower Transportation Fellowship students from top universities across the nation. Her poster session is based on research titled, “Discrete Choice Modeling for Raleigh-Durham International Airport.” Runey works in the Triangle Regional Model Service Bureau at ITRE. Another award was given at the event for outstanding research of which a current ITRE student was recipient. The D. Grant Mickle Award for outstanding paper in the field of operation, safety, and maintenance of transportation facilities was given to Zachary Clark as well as four other researchers for work done while Clark was studying at Purdue University before coming to ITRE and North Carolina State University. The paper was titled, “Evaluation of Stop Bar Video Vehicle Detection Accuracy at Signalized Intersections.” Both Runey and Clark are also Transportation Founders Fund Scholars at NC State.

The following is a complete list of ITRE papers presented at the 2006 TRB Annual Meeting. Many of these papers will be published in the Transportation Research Record to serve as a national resource for transportation-related decision making. Abstracts for these papers can be found on the ITRE Web site: www.itre.ncsu.edu.

Exploratory Analysis of Crossing Difficulties for Blind and Sighted Pedestrians at Channelized Turn Lanes– Bastian Schroeder, Nagui Roupail, et al.

Sensitivity Analysis of Highway Capacity Manual Input Variables and LOS Analysis Tool for Four Facility Types in North Carolina – Shannon Fain, Robert Foyle

Effect of Roundabout Operations on Pollutant Emissions – Nagui Roupail

Community Impact Assessment Practice: Where we’ve been, Where we are, Where we’re going – Teresa Townsend, Leigh Lane, and Ann Hartell

Reasonable Speed Limits on Suburban Multilane Highways with Curbs – Chris Cunningham

Improving Prediction of Annual Average Daily Traffic for Non-Freeway Facilities by Applying Spatial Statistical Method – Leta Huntsinger

Speed and Facility-Specific Emission Estimates for On-Road Light-Duty Vehicles – Nagui Roupail, Zhai Haibo

New Calculation Method for Existing and Extended HCM Delay Estimation Procedures - Nagui Roupail

Incorporating the Effects of Traffic Signal Progression Into the Proposed Incremental Queue Accumulation (IQA) Method – Nagui Roupail

Failure Detection and Diagnosis in Micro-Simulation Traffic Models - Nagui Roupail, Baohong Wan (former Ph.D. student at ITRE)

Integrating Planning and NEPA: Linking Transportation and Land Use Planning to Indirect and Cumulative Impacts – Janet D’Ignazio

School Bus Occupant Protection – Jeff Tsai

Creating and Operating a Walking School Bus Program – Jeff Tsai

ITRE, administered by North Carolina State University, is a non-profit organization that conducts research, education, and technical assistance projects on a wide variety of surface transportation issues with the goals of solving problems and creating new products, better services, and smarter workers. ITRE is located on NCSU’s Centennial Campus. For more information about ITRE and related programs, please visit our Web site at www.itre.ncsu.edu.