I am pleased to present to our colleagues and friends this special edition of ITRE Directions, highlighting the 93rd Annual Meeting of the Transportation Research Board. We typically have used this issue to highlight both the quantity and quality of the research work carried out by ITRE students, affiliated faculty and staff. This year we were involved in eighteen different presentations and workshops, and for the second year in a row, an ITRE supported student was the lead author of a best paper award selected by the prestigious TRB Highway Capacity and Quality of Service Committee (AHB40). More on this paper in the next article. This TRB meeting also represents a bittersweet moment in that it was the very last one to be held in its current location at the Marriott, Omni Shoreham and Hilton hotels on Connecticut Avenue in Washington, ending a tradition that some of us have cherished for more than thirty years. As of next year, the entire meeting will be held at the Washington Convention Center, a larger venue that we hope will enable us to continue our tradition of hosting the NC State University reception, which has grown in size and reputation over the years. I am especially grateful to all our sponsors who have year-in year out helped make and shape this highly successful event. I invite you to enjoy some of the reception photos, and our student involvement in this TRB meeting on page two of this newsletter.

**Best Paper Award by TRB Highway Capacity Committee for Research Sponsored by NCDOT**

For the second year in a row, a paper by a former ITRE-resident graduate student was given the best paper award by the Highway Capacity and Quality of Service Committee of TRB. The paper lead author is Yilun Xu, a MS Student who graduated in May 2013 from NC State University, now employed at the University of Minnesota. The paper, which is based on Yilun’s MS thesis is entitled: *Methodology for Developing an HCM-based Oversaturated Speed Flow Model*. Paper co-authors include Dr. Billy M. Williams, Associate Professor in the CCEE Department and Yilun’s thesis advisor, Nagui M. Rouphail, and Thomas Chase, another former MS student at ITRE who is currently pursuing a PhD degree at the University of Florida.

The paper presents a unique approach for screening freeway sensor data for the purpose of revealing the true fundamental relationship between speed, flow and density in the congested flow regime. It is a problem that deals with highly noisy traffic data and that has eluded many researchers and practitioners in the past. The research leading to this paper was sponsored by our partners at the North Carolina Department of Transportation under the auspices of a project entitled *Mobility and Reliability Performance Measures*. ITRE and the CCEE department are grateful for the continuing support NCDOT continues to provide to our students, faculty and staff.

I-r, Nagui Rouphail, Billy Williams, Thomas Chase, Yilun Xu and Dr. Lily Elefteriadou, AHB40 committee chair.
ITRE student activities at TRB
by Shannon Warchol

This January 37 students, including 12 who work at ITRE, made the journey from Raleigh up to Washington, D.C. to attend the annual Transportation Research Board. While we did not arrive in time to participate in any of the workshops, we were able to attend meetings, listen to lectures, and speak with presenters. The undergraduates valued this as an opportunity to explore everything transportation has to offer, focusing on those events with titles that sparked their curiosity, be it ITS, rail, or aviation. Junior Cory Steiss was able to attend a variety of presentation including ITS and emissions, but his favorite lecture was on the advancement of commercial space transportation. “While the traditional lectures I attended were informative, the opportunity to explore other interests was exciting!” Cory explained.

Many of the graduate students were able to use the time to gain a deeper understanding in their area of research and to keep on top of the latest publications from experts across the globe. It was especially rewarding, after spending countless hours in the office reading literature, to put faces to the names of authors we so often run across. A number of current graduate students, as well as a few recent graduates, were able to present their research at TRB. PhD student Chunho Yeom and several ITRE staff members were able to present a poster on the topic of Lane Utilization at Two-lane Arterial Approaches to Double Crossover Diamond Interchanges. Chunho valued the opportunity, stating he enjoyed being able to “have a conversation with many visitors in a very relaxed setting.”

Graduate and undergraduate students alike took pleasure in attending the NC State reception. There students were able to chat with leaders from industry and academia alike who support our work. It is always a great opportunity to personally thank those who support our education.