NCIT has been active in identifying policy solutions that might have a major role in improving state and national transportation systems. The U.S. economy, currently in the throes of the deepest recession in decades, relies heavily on its safe and efficient transportation system. Our strategic plan is based on the assumption that our national transportation system can be greatly improved with an increased emphasis on intermodal connectivity and the rational utilization of all modes of transportation. Through NCIT’s efforts in research, education, and technology transfer, we are making a difference in the development of a safe and efficient national intermodal transportation system. We have funded exciting research projects that result in recommendations related to transportation issues across modes. We present the results of our research at national and international conferences. Most recently, and described in this newsletter are the conferences, seminars and workshops we have conducted for our constituents, the public, faculty and students on the latest issues facing intermodal transportation. We participate in the education of the next generation of transportation professionals. In short, we are trying to set the agenda for future research directions.

NCIT is funded to promote research in the development, planning, design, improvement, and assessment of a safe, secure, and efficient intermodal transportation system for passengers and freight. We are currently supporting a project to analyze Congestion and Capacity Impacts from Disruptions to Critical Infrastructures in the Rail Network. These and other key projects are designed to promote the safety and efficiency of the transportation system through a focus on intermodal solutions. You can visit our web site at http://ncit.msstate.edu/ to learn more about our current projects.

Patrick Sherry, Ph.D.
NCIT Co-Director
University of Denver

Burak Eksioglu, Ph.D.
NCIT Co-Director
Mississippi State University
NCIT: Partnering in Educational Success

NCIT is committed to enhancing educational programs in transportation that incorporate the multidisciplinary nature of intermodal transportation. The activities of NCIT build upon the activities of the Intermodal Transportation Institute (ITI) at the University of Denver and the activities of the centers with transportation focuses at Mississippi State University.

ITI offers an Executive Masters Program that awards a Master of Science in Intermodal Transportation Management from the University of Denver. This graduate degree program prepares transportation industry managers for the increasingly complex, global business environment where knowledge of finance, quantitative processes, supply chain, law, and public policy issues as well as freight, passenger, and intermodal transportation operational strategies are critical management tools for success.

The ITI has continued its success by celebrating the graduation of its 101st student this past June from the Executive Masters Program. Many of our students have gone on to receive significant promotions within their respective organizations and to make dramatic contributions to the national transportation system. Students in the ITI program are informed by lectures and support from NCIT staff and faculty. Professor Sherry routinely lectures on the topics of safety and hours of service regulations in the freight and passenger rail industry.

The ITI students completed their annual travel seminar again this April visiting Hutchinson World ports in Hong Kong and listening to lectures and briefings from government officials and executives from Maersk Shipping. Attendees commented on the complexity and continuing growth of the port facilities as well as the outstanding world class passenger transportation system MTR.

The ITI Executive masters program began as a result of the efforts of the dedicated board members, key DU faculty, and generous support from NCIT. The resultant success of its programs and graduates is self-evident.
Research Proposals

The National Center for Intermodal Transportation recently issued a request for research proposals in early 2009. NCIT is funded to promote research in the development, planning, design, improvement, and assessment of a safe, secure, and efficient intermodal transportation system for passengers and freight. A number of high quality proposals were received including:


Chi, G. *Assessing Economic and Demographic Impacts of Intermodal Transportation Systems*.

Durr, R. & Sherry, P. *Development of a Selection Tool for use in the Identification, Recruitment & Retention of Safe and Competent Intermodal Transportation Workers*.


Ekşioğlu, S.D. & Allen, A. *Intermodal versus Rail, Truck and Barge in Transporting Biomass and Biofuels*.

Jin, M., & Zhang, L. *Analyzing Congestion and Capacity Impacts from Disruptions to Critical Infrastructures in the Rail Network*.

Kramer, R. *Evaluation of a Virtual Warehousing RFID Technology for Intermodal Transportation*.

Pinarowicz, J., Cade, J., *Identification of Barriers to the Recruitment & Retention of Women Intermodal Transportation Workers*.

Salters, R. *Modeling, Simulation and Design of a Traffic Congestion Accident Prevention and Warning System (TCAPWS)*.


Strawderman, L. & Ekşioğlu, B. *Development of an Intermodal Training Program for Disaster Relief Agencies*.

Strawderman, L. & Usher, J. *Implications of System Usability on Intermodal Facility Design*.

Zhang, L. & Ekşioğlu, S.D. *Coordination of Transit Signal Priority and Intelligent Vehicle Initiate on Transit Evacuations*.

NCIT Outreach and Technology Transfer:

When NCIT was founded in 1998 as a University Transportation Center one of its goals was to serve as a major national resource for educational, research, and technology transfer activities involving intermodal transportation. The past six months have seen a number of seminars and outreach activities designed to promote technology transfer including:

**Fall 2009**

- **September 10th**: Development of the Integrated Biomass Supply Analysis and Logistics Model, Dr. Shahab Sokhansanj, Adjunct Professor University of British Columbia, University of Tennessee, and Emeritus Professor, University of Saskatchewan. Second floor in the Dunn Conference Room, at 11:30 a.m.

- **November 6th**: The Impacts of Highway Expansion on Population Redistribution: An Integrated Spatial Approach, Assistant Professor of Department of Sociology at Mississippi State University. Second floor in the Dunn Conference Room, at 11:30 a.m.

- **November 19th**: A Discussion of Recent Waterborne Transportation Related Issues, Administrator of Tennessee-Tombigbee Waterway Development Authority. Second floor in the Brannan Conference Room, at 12:30 p.m.

**Spring 2009**

- **January 23rd**: A Game Theoretic Approach to Updating and Improving Decision-making in OR Applications, Dr. Sharif Maluku, Assistant Professor Operations Management, University of Alabama. Second floor in the Dunn Conference Room, at 11:30 a.m.

- **February 6th**: Transportation Workshop, featuring MSU faculty, students, and staff presenting ongoing research that identifies interdisciplinary collaboration venues within the university and centers. [Click here for workshop abstracts](#). First floor, Elton King Room, at 12:30 p.m.

- **April 24th**: Transportation Research Seminar featuring Acey Roberts, ITS Engineer with Mississippi Department of Transportation -Traffic Engineering Division. He will discuss MDOT’s response to Hurricane Gustav which featured the largest mass evacuation in Louisiana’s history. Second floor in the Dunn Conference Room, at 11:30 a.m.

- **May 27 & 28**: Beyond the Crossroads: Infrastructure Planning and Funding in the Wake of the Regulatory Crisis. Various speakers discussing the need for changes in regulation regarding finance and policy. HRTM Building University of Denver Campus.
International Rail Safety Conference

This conference was held in 2008 in Denver, Colorado at the University of Denver’s Cable Center. This event was hosted by the Association of American Railroads, the National Center for Intermodal Transportation, the University of Denver, the International Union of Railways, the Railway Association of Canada, The American Shortline and Regional Railroad Association, and the Transportation Technology Center. This conference attracted approximately 115 delegates from countries throughout the world. Attendees included senior railroad safety and operating personnel, regulators and researchers.

The conference presentations addressed a number of key and timely issues in rail safety. Several presentations dealt with the theme of dealing with natural disasters such as those resulting from pandemics. In addition, the issue railway suicide was discussed by speakers from both the US and Germany who face high numbers of these types of incidents. Past sessions of this annual conference have most recently been held in India, Ireland, South Africa, and Australia and this was the conference’s first visit to North America since 1999.

Conference Presentations:

Vision Zero: Guiding-Star for Safer Transports (Presentation) (Paper), Susanne Kallman; Swedish Rail Administration

A Sustainable Safety Performance For Railways (Presentation) (Paper), Angelo Pira; Project Officer at the European Railway Agency (ERA), Valenciennes France

Safety Springboard to Sustainability (Presentation) (Paper), James Catmur; Arthur D. Little Limited

A Rail Safety Campaign by the Australian Rail, Tram and Bus Industry Union (RTBU) (Presentation) (Paper), Roger Jowett; National Transport Policy Adviser, RTBU

Moving Toward a Just Culture in the U.S. Railroad Industry Through Development of a Confidential Reporting System (Presentation) (Paper), Dr. Jordan Multer; Volpe Center

Get the Basics Right - Change the Culture and Reduce the Risk (Presentation) (Paper), Sue McCarrey; Transport Authority of Western Australia

A Regulator’s Challenge - Inspecting the Right Things (Presentation) (Paper), Allan Spence; HM Deputy Chief Inspector (Operations), HM Railway Inspectorate, London
A Systematic Approach to Safety Risk Management, Dr. Patrick Sherry, National Center for Intermodal Transportation

The Road/Rail Interface - A Joined-up Strategic Initiative (Presentation) (Paper)
Simon Fletcher; International Union of Railways Safety and Interoperability

The University of Nebraska-Lincoln Highway-Rail Grade Crossing Test Bed (Presentation) (Paper)
Dr. Elisabeth G. Jones; Associate Professor, Civil Engineering - Associate Director, Mid-America Transportation Center

Union Pacific Railroad's Fatigue Risk Management System (FRMS) (Presentation) (Paper)
Dr. Dennis Holland; Director Occupational Health Psychology, Union Pacific Railroad

Managing the Threat of Influenza Pandemic to a Railway (Presentation) (Paper)
George Lee; General Manager - Safety & Quality, MTR Corporation

Railway Suicides and Railway Suicide Prevention of Deutsche Bahn AG (Presentation)
Fritz Schröder; Safety Director, System, Deutsche Bahn AG

Natural Disaster Countermeasures Conducted by East Japan Railway Company (Presentation) (Paper), Susumu Hashizume; Deputy General Manager, Transport Safety Department, East Japan Railway Company

Development and Application of Hazard Analysis & Risk Assessment Models for the Korea Railway (Presentation) (Paper), Dr. Chanwoo Park; Korea Railroad Research Institute

Additional presentations and material can be found on the IRSC Website:

Infrastructure Planning and Funding in the Wake of the Regulatory Crisis

NCIT, in collaboration with the Mountain Plains Consortium (MPC) and the Mineta Transportation Institute, will be hosting a two-day workshop on “Infrastructure Planning and Funding in the Wake of Regulatory Crisis”. This workshop brought together leaders in the industry, government officials, academics, and policy makers who made presentations and engaged in “conversation-circle” dialog to develop recommendations for needed improvements in the overall transportation system, the policies needed to implement them, new research to support policy and investments, new ways to finance transportation, and new and innovative structures for developing policy. The following were some of the key recommendations that emerged during the two-day conference:

1. Develop more cooperative national research programs between universities and public sector agencies with a focus on both intermodal passenger and freight with an additional focus on how universities can contribute to the education of the public relative to national transportation policy.
2. Develop research that will focus on the economic and safety impact of new policies and regulations as well as the impact of alternative funding methods (VMT and tolling) on both vehicle and highway use for different municipalities and regions.
3. Investigate the development of high-speed rail corridors and their impact on congestion, freight movement, and economic development.
4. Broaden the planning process to include local, regional, state and federal level to include all, look at the role of both state and federal and involve more federal and regional planning.
5. Examine the role of capital investment, tax credits and overall infrastructure investment with an eye to public-private partnerships to ensure that there will be a positive economic outcome for investment in such projects.
6. Revise the policy development process in congress and locally to shift from a modal approach to an intermodal passenger and intermodal freight structure of committees and regulatory agencies.
7. Develop more complex and robust methods of analysis for assessing the impact of transportation investment to include a “performance based” model that examines the impact of transportation on a systems level as well as a broader array of outcome metrics to include social, environmental, and economic livability outcomes.

Our distinguished speakers included:

Co-sponsors:

Honorable Rod Diridon, Sr., Executive Director, Mineta Transportation Institute

Denver Tolliver, Mountain Plains Transportation Institute
Visit our website at www.ncit.msstate.edu for more information.