



The Gulf Coast Center for Evacuation & Transportation Resiliency

NEWSLETTER VOLUME 1



Director's Message



Center Director
Dr. Brian Wolshon

The Gulf Coast Research Center for Evacuation and Transportation Resiliency was initiated in the fall of 2008 with the mission to fill the critical need for new methods and technologies in emergency transportation. Although historically overlooked as a transportation subject; evacuation, resiliency, and emergency transportation operations are vital to the national interest, and impact the lives and safety of the public on far greater scales than are often assumed.

The Center's director, Dr. Brian Wolshon, is a national expert in the field of evacuation transportation and has been involved for many years in the research and development of evacuation techniques and management strategies.

Our new Center has been conceived as a collaborative partnership between Louisiana State University (LSU) and the University of New Orleans (UNO) to permit the wealth of diverse expertise and resources of both institutions to be pooled to develop solutions for problems facing our society. In the future, it is expected that researchers from other areas of the country will join in these efforts.

Among the immediate goals of the Center are to support innovative research within the collaborating universities while stimulating student interest and involvement to encourage them to pursue careers in transportation. Over the long term, it is hoped that the knowledge created in the Center will lead to fundamentally new methods and systems for moving people, vehicles, and goods both safely and efficiently during emergencies and other types of major events.

More details on the Center can be found at:
www.evaccenter.lsu.edu

People

The Center is fortunate to involve some of the top national and international researchers on topics related to evacuation and resilient transportation systems. Together, these researchers will seek to both develop and carry out a plan for the exploration, training, and implementation of emerging knowledge related to the Center themes.



Vinayak@lsu.edu

Dr. Vinayak Dixit, the Associate Director of Research at LSU, has an extensive record of research on topics related to evacuation and traffic operations. His work has supported efforts by the Florida DOT to improve hurricane evacuations.



jrenne@uno.edu

The research of Dr. John Renne, Associate Center Director at UNO, focuses on transportation and land use planning, including smart growth, sustainability, and transit-based evacuations. He is the Principal Investigator on a National Study of Carless and Special Needs Evacuation Planning for the Federal Transit Administration.



wmfields@uno.edu

The research of Dr. Billy Fields, Associate Center Director at UNO, includes extensive work on the intersection of land use and transportation including work on the quantification of the health and transportation benefits of walking and biking.



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Dr. James Amdal, Associate Center Director at UNO, also has expertise in urban planning. He has also served as a professional advisor to the District 5 Recovery Steering Committee for the greater Lakeview community post-Katrina.





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Student Involvement

Another key component of the Center is student involvement. Currently six graduate students and one undergraduate student are engaged in research projects supported by the Center. Wakeel Idewu, a Ph.D. candidate at LSU, is developing and field testing innovative strategies for lane-drop merge areas in highway work zones. Hana Naghawi, also a Ph.D. candidate at LSU, is working to develop and test transit-based evacuation strategies using regional microscale traffic modeling. Thomas Montz, a senior undergraduate student at LSU, is validating and analyzing output from a TRANSIMS evacuation model of New Orleans. Robert Peterson, a graduate student at UNO, is assisting with the research of the “National Study on Carless and Evacuation Planning.” Darin Acosta, a graduate student at UNO, is involved in the Pedestrian Bicycle Resource Initiative. Tom Haysley, a graduate student at UNO recently modeled the Recovery of New Orleans through examining indicators of recovery. Bill Spivey, a graduate student at UNO recently studied the feasibility and impacts of the Commuter Rail from New Orleans to Baton Rouge.

Outreach Activities

On March 26, 2009, the Center co-hosted a conference in New Orleans with the Center of Urban and Public Affairs at UNO and the National Corridors Initiative called **“Setting A Vision for Sustainable Development: The Louisiana Transportation Renaissance”**. Keynote speakers included: Louisiana DOTD Secretary William Ankner, Meridian, MS Mayor John Robert Smith, and Mr. William Millar - President and CEO of the American Public Transportation Association.

On March 27, 2009, the Center also hosted the Region 6 UTC Conference at the University of New Orleans. Representatives from FHWA-RITA, the Texas Transportation Institute and South West Regional University Transportation Center at Texas A&M, Oklahoma Transportation Center at the University of Oklahoma, and the Center for Transportation Research at University of Texas at Austin met to discuss ongoing and research and plans to develop collaborative ties for future research and student exchange.

Research

The Center recently awarded two grants to LSU faculty to support research on the fundamental behavior of evacuees during emergencies and the development of innovative engineering solutions to alleviate congestion.

An Integrated Approach to Modeling Evacuation Behavior

Principal Investigator: Dr. Sudipta Sarangi Department of Economics - We will develop an integrated approach to modeling evacuation behavior that considers both economic and non-economic factors for the decision. The abstract theoretical model takes hyperbolic discounting and peer effects into account. We will use data from Hurricane Andrew to test the theoretical models. Since the collected data does not include risk attitudes, to obtain these we also conduct some simple experiments.

Resilient Transportation: An Integrated Corridor Management Approach

Principal Investigator: Dr. Sherif Ishak, Department of Civil and Environmental Engineering - The primary goal of this research is to lay the foundation for the application and implementation of integrated corridor management (ICM) strategies to reduce congestion on the freeway and arterial systems in Baton Rouge. Under the ICM umbrella, the operation of freeways and arterials should be optimized for various functions such as traffic incident management, work zone management, planned special events management, and recurrent day-to-day conditions. An efficient integrated corridor management approach will be developed by utilizing ramp-metering strategy, information dissemination strategy and other ITS strategies along congested corridors. This research will develop theory and algorithms for the efficient implementation of the ramp metering and information dissemination strategies.

Related Projects

The fundamental research conducted at the Center and the expertise of the research team at LSU and UNO has spurred several projects of national importance in the fields of evacuation and resilient transportation systems that are supported by the United States Department of Homeland Security, National Science Foundation, Louisiana DOTD, the Sandia National Laboratories, Federal Highway Administration, and the Federal Transit Administration.

Announcements

Student Scholarship (for LSU-UNO students)

- One \$500 Undergraduate Scholarship
- Two \$750 Graduate Scholarships
- One \$1000 travel scholarship for

Application details can be found on the Center website

For more information contact

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