

UTRC-REGION II NEWSWIRE

UTRC Press Release

Friday, January 31, 2014

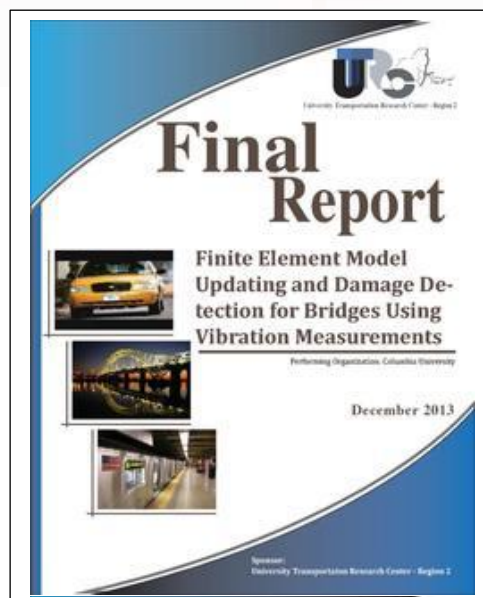
Contact: Nadia Aslam
Assistant Director for Technology Transfer
University Transportation Research Center - Region 2
Tel: 212-650-8051
Email: nadia@utrc2.org

The University Transportation Research Center Publishes the Final Report for the Research Project Titled: "Finite Element Model Updating and Damage Detection for Bridges Using Vibration Measurements"

UTRC has released a final report for the research titled: "**Finite Element Model Updating and Damage Detection for Bridges Using Vibration Measurements**", funded by the Research and Innovative Technology Administration/USDOT (RITA). The principal investigator was **Dr. Raimondo Betti**, a professor of Civil Engineering and Engineering Mechanics at Columbia University.

In this report, the results of a study on developing a damage detection methodology based on Statistical Pattern Recognition are presented. This methodology uses a new damage sensitive feature developed in this study that relies entirely on modal characteristics, i.e. natural frequencies and mode shapes, directly identified from measurements of the structural response. A procedure for training the damage detection methodology to account for variability induced by operational conditions, i.e. temperature, traffic, wind, etc., has been proposed to determine boundaries of variability of the cumulative distribution functions of the various features.

The full report is available for a free download at the UTRC website: <http://www.utrc2.org/publications/final-finite-element-model>



Like us on Facebook 

Follow us on 

View our profile on 

About The University Transportation Research Center

The University Transportation Research Center (UTRC) is a USDOT Regional Transportation Center addressing surface transportation operations, management, design economics and planning. The Region 2 University Transportation Research Center is one of ten original National Centers, established in 1987, in recognition that transportation plays a key role in the nation's economy and in the quality of people's lives. Located at the City University of New York, the Center is a Consortium of 17 major Academic Institutions in New York, New Jersey, and Puerto Rico. Through the Grant supporting the Center, the mission incorporates research, education and the transfer of technology in the field of transportation. Academically based, the work of Faculty and Students – graduate and undergraduate provide a critical link in resolving our national and regional transportation problems while training the future and current professionals who address our transportation system and their customers on a daily basis. For more information, visit www.utrc2.org.