



UTC Project Information – Cooperative Mobility for Competitive Megaregions (CM²)

Project Title	Utilize Crowd-Sourced Data and Machine Learning Technology to Enhance Planning for Transportation Resilience to Flooding
University	University of Texas at Austin (UT Austin) Texas Southern University (TSU)
Principal Investigator	Ming Zhang
PI Contact Information	zhangm@austin.utexas.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	U.S. Department of Transportation: \$88,100 University of Texas at Austin: \$ 31,436 Texas Southern University: \$ 13,531.50
Total Project Cost	\$133,067.50
Agency ID or Contract Number	UTDOT Grant number: 69A3551747135
Start and End Dates	9/1/2018 - 5/31/2020
Brief Description of Research Project	The latest federal transportation legislation requires transportation agencies to incorporate resiliency into their transportation planning process. However, agencies like MPOs and emergency management authorities are short of effective tools to assess real-time disaster conditions and affected areas in order to make quick responses. This project aims at developing a decision support system (DSS) that combines non-traditional, crowd-sourced big-data with traditional data (e.g. remotely sensed data, GIS, and statistical data) to improve flood risk assessment and enhance transportation readiness for quick response decisions on disaster management. The project focuses on urban flooding. While not all urban flooding is severe enough to threaten lives and property loss, it is the small scale flooding events that reveal the vulnerable sites, segments, and sectors where major damages likely occur when severe storms and hurricanes hit.
Describe Implementation of Research Outcomes (or why not implemented)	Not implemented yet, project is still ongoing
Impacts/Benefits of Implementation (actual, not anticipated)	No impacts yet
Web Links (to reports, project website, etc.)	N/A