

UTC Project Information	
Project Title	Needs Assessment for Multi-Modal Emergency Transportation Operations with a Focus on an Aging Population
University	Florida State University
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$41,800 Florida State University: \$83,600
Total Project Cost	\$125,400
Agency ID or Contract Number	DTRT13-G-UTC42-03317-34609
Start and End Dates	1/9/2014 – 12/23/2014
Brief Description of Research Project	In the aftermath of disasters, evacuating aging victims and maintaining an optimal flow of critical resources to affected areas to serve their needs becomes problematic. For example, during and/or after Hurricane Katrina, the fatalities were mostly aging people. This highlights the vulnerability of the aging population to disasters and clearly indicates that emergency transportation plans and operations should consider providing them necessary assistance. Moreover, food shortages and power outages enveloped a very large region from Louisiana to Florida, which happened mainly due to disruptions in the transportation infrastructure system as well as due to random and highly dynamic changes in affected populations' service demands, and unavailability of critical resources due to a lack of planning. This indicates the need for a robust emergency multi-modal transportation planning and decision-making framework that enables safe and accessible evacuation of a maximum number of aging people, and optimizes the flow of critical resources into the affected disaster region to satisfy the needs of those who remain. The proposed research will identify, for the first time in the emergency management field, the system requirements to create such a multi-modal emergency transportation framework, with importance given to ensuring the sustainability and resiliency of the emergency relief system. Following a thorough study and general assessment of the transportation network and infrastructure, the requirements of the framework based on infrastructure system profiles, availability, allocation, and optimal assignment of critical resources will be described. This knowledge base will be tailored to identify the specific needs of the aging population during a disaster focusing on the following critical outcomes: safety, accessibility, speed, reliability and fulfillment. This will be followed by a case study with focus on the aging victim and applied to the Florida Department of Transportation's District 3 region. The application of the research will also be extended to other areas of Florida and elsewhere in the U.S.
Describe Implementation of Research Outcomes (or why not implemented)	
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"> • Reports • Project website 	