

<b>UTC Project Information</b>	
Project Title	Biomechanics of Older Drivers to Mitigate Injury in Automobile Accidents
University	Florida State University (FSU)
Principal Investigator	John Sobanjo, Ph.D., P.E
PI Contact Information	Department of Civil and Environmental Engineering Phone: 850.410.6153 Email: <a href="mailto:jsobanjo@fsu.edu">jsobanjo@fsu.edu</a>
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$150,000 Florida State University: \$75,000
Total Project Cost	\$225,000
Agency ID or Contract Number	DTRT13-G-UTC42-033177-036103
Start and End Dates	1/5/2015 – 8/5/2016
Brief Description of Research Project	This study is evaluating both vehicle crashworthiness and occupant protection, with focus on aging occupants. Finite Element (FE) dummy models are being developed for aging driver/passenger (occupants) in automobiles, based on the population-average dummy models by LS-Dyna computer software. For selected cases, aging occupants using the Total Human Model for Safety (THUMS) will be also studied. These models will incorporate the frailty aspects of the aging person and other attributes. After developing the FE dummy models for aging occupants, FE analyses will be conducted simulating vehicle accidents. The types of vehicle accidents are vehicle-to-vehicle collisions and vehicle collision with roadway objects such as bridge columns. The biomechanical responses from the model will include estimates of incidence and severity of injuries to head and thoracic parts of the body. There would be focus on Injury Mechanisms, Biomechanical Response, and Human Tolerance (specifically for the aging human). The study will develop survivability envelopes for vehicle impacts for aging occupants, and compare them with those for younger occupants. The study will enable biomechanics-based recommendations to minimize the severity of injury, should accidents occur. It will compare different roadside conditions and will study to see if design improvements can alleviate injuries. Roadside designs may include geometric factors such as the side slope, and other pertinent roadway features.
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"> <li>• Reports</li> <li>• Project website</li> </ul>	