



UTC Project Information	
Project Title	SMART Feedback System for Bridge Asset Management through the Development of Generating Artificial Intelligence Network (GAIN) Members.
University	The University of Georgia Research Foundation (UGARF)
Principal Investigator	Mi Geum Chorzepa
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Funding Source(s) and Amounts Provided (by each agency or organization)	IBT-ABC-UTC funds :\$34,500 Match funds : \$34,500
Total Project Cost	\$ 69,000
Agency ID or Contract Number	69A3552348322
Start and End Dates	January 1, 2025 - Active
Brief Description of Research Project	<p>We propose developing smart bridge components, such as girders, equipped with sensors and/or computer vision technologies to generate data for analysis using artificial intelligence (AI). These components, referred to as Generating Artificial Intelligence Network (GAIN) members, will provide bridge owners with enhanced asset management information. GAIN members will supply data to the bridge network, offering real-world feedback. When deployed at strategic locations, both at the state level and nationwide, GAIN members could deliver valuable insights into state and national networks, supporting bridge construction, mobility, welfare operations, and emergency evacuations.</p> <p>The anticipated benefits of such a system include monitoring performance metrics (e.g., temperature and strain in steel and concrete) during fabrication, construction (e.g., pile driving), and service, including live load/performance monitoring. The information collected can inform state bridge owners on quality assurance during fabrication and construction, as well as maintenance, repair, and replacement (MRR) decisions.</p>
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The outcomes will be tracked and reported once they are identified.

Impacts/Benefits of Implementation (actual, not anticipated)	The impacts will be tracked and reported once they are identified.
Web Links <ul style="list-style-type: none">• Reports• Project website	https://abc-utc.fiu.edu/smart-feedback-system-for-bridge-asset-management-through-the-development-of-generating-artificial-intelligence-network-gain-members-2/