



ACCELERATED BRIDGE CONSTRUCTION
UNIVERSITY TRANSPORTATION CENTER

UTC Project Information	
Project Title	Construction of Three Large-Scale Robots Capable of Constructing UHPC Shell, Repair of Culvert and Automated MFL
University	Florida International University
Principal Investigator	Anthony Abrahao
PI Contact Information	aabrahao@fiu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	\$40,000 from ABC-UTC \$20,000 from FIU
Total Project Cost	\$60,000
Agency ID or Contract Number	69A3551747121
Start and End Dates	03/01/2021 - Active
Brief Description of Research Project	<p>Three ongoing ABC projects involve tasks, that demand the development of specialized robots. Within those projects, small scale robots are developed. However, students, do not have the knowledge or capability to develop robots that can print or function at full-scale. Applied Research Center (ARC) at FIU has a division that specializes in development of full-scale and functional robots. Under this project, ARC will assist the graduate students involved in the three ongoing ABC projects to develop full scale, customized robots and allow achieving the objectives of those three projects. The three ongoing ABC projects are related to 3D-printing of UHPC shells, UHPC shotcrete for culvert repair, and accelerated inspection of steel strands using MFL technology. The success of this project will have payoff by assisting the three on-going project which have high potential payoffs. The objectives include:</p> <p>Construction of three large scale robots for following three Sub-Tasks</p> <ul style="list-style-type: none"> a) Printing UHPC Shell b) Repair of Culverts Using Shotcrete c) Automated Inspection of Steel Strands using MFL Technology
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	This project just started, Outcomes will be reported as work progresses
Impacts/Benefits of Implementation (actual, not anticipated)	This project just started, Impacts/Benefit will be reported as work progresses

Web Links

- Reports
- Project website

<https://abc-utc.fiu.edu/research-projects/construction-of-three-large-scale-robots-capable-of-constructing-uhpc-shell-repair-of-culvert-and-automated-mfl/>