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| **UTC Project Information – Project 1.12** | |
| Project Title | Improved UAV-Based Structural Inspection Techniques and Technologies for Northeast Bridges |
| University | University of Maine |
| Principal Investigator | Eric Landis |
| PI Contact Information | landis@maine.edu |
| Co-PI(s) | Alex Friess, Ali Shirazi |
| Co-PI Contact Information |  |
| Funding Source(s) and Amounts Provided (by each agency or organization) | TIDC ($279,593), UMaine in-kind ($287,150) |
| Total Project Cost | $566,743 |
| Agency ID or Contract Number | 69A3551847101 |
| Start and End Dates | 10/1/2020 – 9/30/2023 |
| Brief Description of Research Project | Unmanned aerial vehicles (UAVs) or “drones” are revolutionizing some basic reconnaissance, including structural inspections. This project seeks to enhance and expand the range of applications for unmanned aerial vehicles (UAVs) to aid inspection of transportation structures. This project is primarily aimed at UAV modifications to allow new ways for the vehicles to get additional information, for example allowing the UAV to come in contact with the structure to allow for more high-fidelity measurements, or developing sensor array packages that can be varied based on the structure and the information desired. Proposed tasks include work with commercially available UAVs and development of new prototypes that can be used in  specialized applications. Subsequent tasks will examine ways to optimize both the data collection and data interpretation, using AI-based data fusion approaches. Finally, both laboratory and field testing and validation are proposed. The work will be conducted in collaboration with both the Maine Department of Transportation and an engineering consultant  VHB. |
| Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here | To be completed after actual implementation has occurred |
| Impacts/Benefits of Implementation (actual, not anticipated) | To be completed after actual implementation has occurred |
| Web Links   * Reports * Project website |  |