**Project Information Form**

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Field Validation of a Drive-By Bridge Inspection System with Wireless BWIM + NDE Devices</th>
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<tbody>
<tr>
<td>University</td>
<td>Georgia Institute of Technology, University of Alabama at Birmingham</td>
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<tr>
<td>Principal Investigator</td>
<td>Yang Wang, Nasim Uddin, Laurence J. Jacobs, Jin-Yeon Kim</td>
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</tbody>
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| PI Contact Information | Dr. Yang Wang  
School of Civil and Environmental Engineering  
Georgia Institute of Technology  
790 Atlantic Drive  
Atlanta, GA 30332-0355  
Phone: (404) 894-1851, FAX: (404) 894-2278  
Email: yang.wang@ce.gatech.edu |
<p>| Funding Source(s) and Amounts Provided (by each agency or organization) | $210,000 (UTC) + $180,000 (GDOT) + $100,000 (ALDOT) |
| Total Project Cost | $490,000 |
| Agency ID or Contract Number | DTRT12GUTC12 |
| Start and End Dates | November 1, 2013 - November 1, 2015 |
| Brief Description of Research Project | In this project, a wireless sensor network will be investigated for installation on a heavy truck to record the dynamic response of the truck as it crosses a bridge mounted with BWIM+NDE devices. The sensors installed in the vehicle include accelerometers to measure vibration and gyroscopes to capture vehicle pitching motion. As the instrumented vehicle approaches the bridge, BWIM+NDE system wirelessly establishes communication with wireless sensors on the vehicle to synchronize time and initiate data collection. As the truck crosses the bridge, the wireless sensors on the truck transmit vibration and pitching data to the wireless BWIM+NDE server for automatic integration with bridge response data. Experimental validation of the proposed wireless system will be performed both in the lab and in the field. |
| Describe Implementation of Research Outcomes (or why not implemented) | The project is undergoing research and development phase. |</p>
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<th>(Attach Any Photos)</th>
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<tbody>
<tr>
<td>Impacts/Benefits of Implementation (actual, not anticipated)</td>
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<tr>
<td>Web Links</td>
<td><a href="http://nctspm.gatech.edu/field-validation-drive-by-bridge">http://nctspm.gatech.edu/field-validation-drive-by-bridge</a></td>
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<td>• Reports</td>
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