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| **UTC Project Information** | |
| Project Title | MPC-374 – An Integrated Real-Time Health Monitoring and Impact/Collision Detection System for Bridges in Cold Remote Regions |
| University | North Dakota State University |
| Principal Investigator | Mijia Yang  Frank Yazdani |
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| Funding Agencies | USDOT, Research and Innovative Technology Administration |
| Agency ID or Contract Number | DTRT12-G-UTC08 |
| Project Cost | $200,000 |
| Start and End Dates | January 1, 2012 – December 31, 2013 |
| Project Duration | 2 Years |
| Brief Description of Research Project | The goal of the proposed project is to stimulate the innovation of *an integrated real-time health monitoring, impact/collision detection system through optical sensors* for bridges in cold remote regions. The objectives of the proposed research are fourfold: (1) To develop a general design for the integrated structural health monitoring and  impact/collision detection system, (2) To construct a data post-processing frame for bridge condition assessment and impact/collision events recording and inventory, (3) To fieldimplement the developed health monitoring and detection system in identified bridges in partnership with NDDOT(assistance from NDDOT is in discussion at the current stage), and (4) To monitor the short- and long-term performance of the instrumented bridges using the developed health monitoring and impact/collision detection system. The cornerstone of this proposed project is to develop a viable structural health monitoring and impact/collision detection system using smart optical sensing/wireless technology and field-implement the proposed systems in cold region bridges in partnership with NDDOT. |
| Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here |  |
| Impacts/Benefits of Implementation  (actual, not anticipated) |  |
| Web Links   * Reports * Project Website | https://www.ugpti.org/resources/reports/details.php?id=792 |