

<b>UTC Project Information</b>	
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
PI Contact Information	<p>Mijia Yang Department of Civil Engineering North Dakota State University Phone: 701-231-5647 Email: mijia.yang@ndsu.edu</p> <p>Frank Yazdani Department of Civil Engineering North Dakota State University Phone: 701-231-5647 Email: frank.yazdani@wsu.edu</p>
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	<p>The goal of the proposed project is to stimulate the innovation of <i>an integrated real-time health monitoring, impact/collision detection system through optical sensors</i> 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.</p>
Describe Implementation of Research Outcomes (or why not implemented)	

Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project Website</li></ul>	<a href="https://www.ugpti.org/resources/reports/details.php?id=792">https://www.ugpti.org/resources/reports/details.php?id=792</a>