

RESEARCH PROFILE: ISIS

RESEARCH GROUP/LABORATORY:	Intelligent Sensing for Innovative Structures (ISIS) Research Network
INSTITUTION:	University of Manitoba, ISIS Administration Centre Headquarters
ICT RESEARCH ACTIVITY SINCE:	1995
NATURE OF RESEARCH ACTIVITIES:	<p>The ICT-oriented research within ISIS centres focuses on civionics, or the application of electronics to civil structures, including fibre optic sensing technology to ensure structural health monitoring of bridges.</p> <p>ISIS researchers are currently in the process of developing prototype designs for the Billouin sensor system, which measures hoop and axial stress, as well as temperature in pipelines, hydro poles and bridges. The design will improve the sensor read-out units.</p> <p>Additionally, ISIS, along with IDERS Incorporated of Winnipeg, have completed the development of an advanced readout unit capable of measuring structural stress where Fibre Bragg Grating sensors experiencing multiple wavelengths are installed.</p>
SPECIFIC EXPERTISE/ CORE TECHNOLOGIES:	Fibre optic sensor systems, read out instrumentation, civionics
CURRENT PARTNERSHIPS:	
INDUSTRIAL:	IDERS Incorporated, Fox-Tec Incorporated
ACADEMIC/INSTITUTIONAL:	The ISIS network encompasses 14 universities across Canada and 280 researchers.
ICT INDUSTRY CATEGORY:	Energy, infrastructure, testing facility
ICT SPECIALIZATION:	Navigational, measuring and control instrumentation, telecommunications/wireless, remote sensing/imaging
PUBLIC CONTACT:	<p>Dr. Aftab A. Mufti, P. Eng.</p> <p>ISIS Canada Administrative Centre Room A250, Agricultural and Civil Engineering Building University of Manitoba - 96 Dafoe Road Winnipeg, Manitoba R3T 2N2</p> <p>PHONE: 204-474-7476 FAX: 204-474-7519 E-MAIL: muftia@cc.umanitoba.ca</p> <p>www.isiscanada.com</p>