

# Brian L. Barge Microsystems Integration Award

*This award recognizes exemplary research using micro-nanosystems technologies in collaborative, multi-disciplinary and/or multi-technology environments. The research project is expected to be both novel and relevant to industry in Canada.*

Title	Presenters	University
Integration of InGaN micro-LEDs with Amorphous Silicon TFTs for Flexible Displays	Qing Li	University of Waterloo
2D Electromagnetic actuated FPCB based Micromirror Laser Engraving System	Devanshu Kakkar	Ryerson University
A 0.13 $\mu\text{m}$ CMOS Wavelet-Based IC with Spike Detection/Compression/Clustering for Closed-Loop Optogenetics	Gabriel Gagnon-Turcotte	Université Laval
A Readout ASIC in TSMC CMOS 65 nm for Single Photon Avalanche Diode Array with Embedded Digital Signal Processing	Frédéric Nolet	Université de Sherbrooke
A Wireless Smart T-Shirt for Real-Time Breathing Rate Monitor	Hajer Abed	Laval University
Development of MEMS-on-LTCC Substrate	Dorra Bahloul	École de Technologie Supérieure
High Quantum Efficiency Photoconductive Heaters Enable Control of Large-Scale Silicon Photonic Ring Resonator Circuits	Hossam Shoman	University of British Columbia
Multi-modal Densely-integrated Neural-interface for Responsive Neuromodulation	M. Reza Pazhouhandeh	University of Toronto
Pseudo-Continuous Flow FTIR System for Glucose, Fructose and Sucrose Identification in Mid-IR Range	Hamza Landari	Laval University
Qmag project – A diamond-based quantum magnetometer	Olivier Bernard	Université de Sherbrooke
Smart Incubation Microchamber for an Ultra-Stable Micro-Environment for Cell Culture	Nathaniel Brochu; Hamza Landari	Laval University
Triangulation Laser Scanning Rangefinder via FPCB Based 1-D Micro-mirror	Vixen Joshua Tan	Ryerson University
Utilizing Titanium Dioxide Nanotubes and Planar Microwave Resonators for UV-based Gas Sensing	Ben Wiltshire	University of British Columbia