

Centre for Engineering Professional Practice and Engineering Education

Dr. Marcia Friesen

- Engineering education, Mobile health applications in computer engineering

Dr. Jillian Seniuk Cicek

- Engineering education - scholarship of teaching and learning in engineering education

Civil Engineering

Dr. Marolo Alfaro

- Geosynthetic-reinforced earth structures, ground improvement techniques, earthfill dams, northern infrastructure

Dr. Masoud Asadzadeh

- Watershed Modeling, Model Calibration, River-Reservoir Systems Modeling, and applications of optimization and sensitivity analysis in water resources engineering

Dr. Mohamed Bassuoni

- Infrastructure and building materials, durability of concrete, rehabilitation and sustainable concrete infrastructures

Dr. James Blatz

- Geotechnical engineering including design of flood protection infrastructure, infrastructure management and planning

Dr. Young-Jin Cha

- Smart sustainable structural systems using advanced structural health monitoring system and control technologies

Dr. Shawn Clark

- River ice engineering, ecohydraulics, hydraulic structures

Dr. Karen Dow

- River ice engineering, experimental fluid mechanics, computational hydraulics

Dr. Ehab El-Salakawy

- Concrete structures, steel and FRP reinforcement, structural behaviour, seismic performance of FRP-RC frames and hollow-core slabs

Dr. Beata Gorczyca

- Potable water treatment, particle analysis, disinfection, heavy metal removal, water chemistry

Dr. Hartmut Holländer

- Hydrogeology, Groundwater Modelling, Hydrology, Geochemistry, Water Science, Environmental Science & Engineering

Dr. Mohamed Issa

- Sustainability in Construction, ICT in Construction, Construction Health and Safety Management

Dr. Pooneh Maghoul

- Computational Geomechanics, Numerical Modeling, Energy Geo-Structures, Northern Infrastructure, Climate Change, Soil Dynamics

Dr. Babak Mehran

- Optimization of traffic operations and public transportation systems, traffic flow modelling, intelligent transportation systems

Dr. Jan Oleszkiewicz

- Water pollution control, nitrogen/phosphorus removal, sludge to biosolids, anaerobic treatment, hormone removal

Dr. Jonathan Regehr

- Freight transport systems, traffic engineering and modelling, traffic information systems, railroad engineering

Dr. Ahmed Shalaby

- Pavement engineering, performance of highway materials, infrastructure engineering and management, design of sustainable infrastructure

Dr. Dagmar Svecova

- Precast prestressed concrete bridge deck connections; Use of Ultra-high performance concrete in accelerated bridge construction; durability of concrete under temperature and fatigue loading.

Dr. Qiuyan Yuan

- Nutrient removal and recovery, leachate & wastewater treatment, solid waste, biomass, fermentation, anaerobic digestion

Electrical and Computer Engineering

Dr. Udaya Annakkage

- Power System Stability, FACTS, HVDC converters, wind energy systems

Dr. Ahmed Ashraf

- Information & Computing Systems, Biomedical Engineering

Dr. Faouzi Bellili

- Signal Processing and Wireless Communications

Dr. Gregory Bridges

- Biomedical and Electrical Biosensors, Sensors, Applied Electromagnetics

Dr. Douglas Buchanan

- Micro- Nano-electronic Materials and Devices, MEMs-based ultra-sonic transducers

Dr. Ken Ferens

- Telecommunications, Embedded Systems, Distributed Computing

Dr. Shaahin Filizadeh

- Power systems transient simulation; power electronics; electric and hybrid vehicles

Dr. Colin Gilmore

Applied Electromagnetics, Electromagnetic Inversion

Dr. Aniruddha Gole

- Power systems simulation, flexible AC Transmission systems (FACTS), High Voltage DC Transmission (HVDC)

Dr. Carl Ho

- Power Electronics, Energy Efficiency, Renewable Energy Technologies, Smart Grids and Micro Grids

Dr. Ekram Hossain

- Wireless communication networks, cognitive radio systems, multimedia communications over wireless and mobile networks

Dr. Dustin Isleifson

- Electromagnetics and Remote Sensing

Dr. Ian Jeffrey

- Applied and Computational Mathematics, High Performance Computing, Parallel Programming, Electromagnetics

Dr. Witold Kinsner

- Software/hardware computing engines for signal and data compression in cognitive machines and systems

Dr. Behzad Kordi

- Condition monitoring of high voltage apparatus, electromagnetic modeling of power transmission lines

Dr. Joe LoVetri

- Time domain computational EM, modeling of EMC problems, ground penetrating RADAR, microwave tomography

Dr. Arkady Major

- Laser photonics, biophotonics, solid-state lasers

Dr. Bob McLeod

- Simulation and Modeling Complex Dynamical and Social Systems, Mobile Game Development

Dr. Dean McNeill

- Embedded systems, structural health monitoring, adaptive signal processing, and real-time and ubiquitous computing

Dr. Amine Mezghani

- Wireless Communication, Joint Communication and Sensing, Large-Scale Signal Processing, Hardware Constrained Radio, Antenna Theory

Dr. Puyan Mojabi

- Applied Electromagnetics

Dr. Zahra Moussavi

- Biomedical Engineering, instrumentation, biological signal processing, and rehabilitation

Dr. Vladimir Okhmatovski

- Computational Electromagnetics, High Performance Computing, Electronic Design Automation

Dr. Derek Oliver

- Assessment of HV insulators, scanning probe microscopy, nanoscale and molecular electronics

Dr. Miloslaw Pawlak

- Machine Learning and Pattern Recognition, Statistical Signal Processing

Dr. Athula Rajapakse

- Power system protection, monitoring and control, renewable energy integration, active distribution systems and microgrids

Dr. Elham Salimi

- Microfluidics, Biosensors, and Bioelectromagnetics

Dr. Cyrus Shafai

- Micro/nano-electro-mechanical systems, MEMS, micro-sensors, RF MEMS, MOEMS, adaptive optics

Dr. Sherif Sherif

- Optical coherence tomography, optical and fluorescence microscopy, tissue optics, laser spectroscopy

Dr. Gabriel Thomas

- Digital Signal and Image Processing. Ultrasound Non Destructive Testing

Dr. Douglas Thomson

- Electronic Sensors of Dielectrophoretic actuation, Sensors for Structural Health Monitoring

Dr. Pradeepa Yahampath

- Signal Processing and Communications

Mechanical Engineering

Dr. Subramaniam Balakrishnan

- Computer Assisted Industrial Engineering, Computer Integrated Manufacturing, Robotics

Dr. Eric Bibeau

- Kinetic turbines, biomass, wind turbine icing, plug-in electric vehicles, district Energy Systems

Dr. Madjid Birouk

- Combustion of fuels and bio-fuels, fuel nozzles, droplets gasification, swirling flows

Dr. Vijay Chatoorgoon

- Aerospace Engineering, Acoustic Wave Propagation, Supercritical Flow Stability

Dr. Chuang Deng

- Atomistic modeling and simulations, yielding and plasticity in nanocrystalline materials, grain boundaries

Dr. Philip Ferguson

- Satellite, Attitude Control, Navigation, Space Objects, Composites, Reaction Wheels, Drones, Simulation, Orbit Control

Dr. Raghavan Jayaraman

- Polymer and Composite Processing, Durability & Interfaces in Polymers and Composites, Novel Composite Materials

Dr. Matt Khoshdarregi

- Advanced Manufacturing, Industrial Robotics, Machining, CNC Design, Instrumentation and Mechatronics

Dr. David Kuhn

- Multiphase flow in complex geometries, modelling of abdominal aortic aneurysms

Dr. Xihui (Larry) Liang

- System Dynamics, Condition Monitoring, Fault Analysis, Reliability, Intelligent Maintenance, Big Data, Machine Learning

Dr. Yunhua Luo

- Biomedical Image Construction, Applied Mechanics and Design, Materials Science and Engineering

Dr. Olanrewaju Ojo

- Materials Science and Engineering, Processing-Microstructure-Property relationship studies

Dr. Scott Ormiston

- Modeling of film condensation, heat exchanger shell-side flows, slab foundation heat loss, microchannels

Dr. Qingjin Peng

- Virtual manufacturing, Sustainable product, Modeling and simulation, Product adaptability

Dr. Nariman Sepehri

- Teleoperation and Robotics, Control Systems, Systems Modelling and Identification, Actuators and Fluid Power

Dr. Mark Tachie

- Experimental Fluid Dynamics, Turbulent Flows Over Rough Surfaces, Laser Doppler Velocimetry, Particle Image Velocimetry

Dr. Igor Telichev

- Fracture Mechanics, Nanomechanics and Computational Material Science, Mechanics of Composite Materials

Dr. BingChen Wang

- Computational fluid dynamics, turbulent flow, convective heat transfer, bio-fluids, high-performance computing

Dr. Nan Wu

- Structural Health Monitoring, Structural Repair and Enhancement, Energy Harvesting, Nano-technology

Dr. Malcolm Xing

- Biomaterials, Nanomedicine, Tissue Engineering, 3D Bioprinting, Nanoenergy, Biosensor

Dr. Guozhen Zhu

- Material Science and Engineering