

McMASTER ENGINEERING

WHERE COLLABORATION LEADS TO SMARTER SOLUTIONS

The Faculty of Engineering plays a significant role in helping McMaster University earn its reputation as one of Canada's most innovative universities. Ranked among the world's top engineering schools, our focus on experiential, problem-based learning and our collaborative approach results in smarter insights and ground-breaking ideas. We push the boundaries of discovery and explore technologies that provide industry with a competitive advantage in local and international markets.



The Canadian Centre for Electron Microscopy is Canada's most advanced materials analysis facility and is among the best in the world.



MARC (McMaster Automotive Resource Center) is one of the largest institutes in academia in transportation electrification.



Natalia Nikolova is leading a team of researchers to develop radar technology that can detect concealed weapons as far as 15m away.



The McMaster Manufacturing Research Institute (MMRI) specializes in advanced manufacturing, tooling and advanced polymer processing and design.



Automotive

- Electrification, hybrid, autonomous & connected
- Software certification & safety
- Lightweight, high strength steels and alloys
- Radar / image / sonar / data fusion



Advanced Manufacturing & Micro-Nano

- Next-generation solar energy devices
- Robotics & manufacturing 4.0
- Advanced paints, coatings & corrosive product
- Polymer processing & design
- Micromachining & precision tooling



Bio Innovation

- Biosensors, microfluidics and lab-on-a-chip technology
- Biomechanics and surgical robots
- Novel antibacterials & assistive technologies
- Tissue engineering



Digital & Smart Systems

- Digital health
- Intelligent infrastructure for logistics construction
- Big data/cyber security and cryptography
- Wireless sensing for road & transportation management

We Support Industry Innovation and Commercialization

- First-hand opportunity to recruit talent trained to work with the newest technologies
- Opportunity to apply fresh perspectives and expertise to your design and manufacturing challenges
- Explore new processes without shutting down operations
- Privileged access to unique facilities and state of the art equipment
- Exclusive access to licensing of emerging technology development

Our researchers can help you succeed. Connect with us.

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ENGINEERING SOLUTIONS FOR INDUSTRY

McMaster University is consistently ranked among the top universities in the country for industry-based research. We hire emerging talent and seasoned experts in areas such as bio innovation, micro-nano materials and digital and smart systems. Our experts collaborate with government, the private sector and other institutions to discover, design, and commercialize today's most innovative technologies.



Living Lab:
The Smart Home for Aging Populations
Qiyin Fang is leading a joint project with the Faculty of Health Sciences in a house near campus, where researchers are developing and testing smart technologies that will enable seniors to live more independently in their homes for longer.

Access our expertise and equipment at:

- Canadian Centre for Electron Microscopy
- Centre for Emerging Device Technologies
- Centre for the Effective Design of Structures
- Dofasco Centre for Public Policy
- Centre for Automotive Materials and Corrosion
- GMC Centre for Engineering Design
- McMaster Automotive Resource Centre
- McMaster Centre for Software Certification
- McMaster Institute for Automotive Research & Technology
- McMaster Institute for Energy Studies
- McMaster Institute for Multi-Hazard Systemic Risk Studies
- McMaster Institute for Polymer Processing Technology
- McMaster Manufacturing Research Institute
- Smeltzer Corrosion Laboratory
- Steel Research Centre

#ThinkEngineering



DIGITAL

- Wireless sensing for road and transportation management
- Micro-nano materials development and optimization
- Big data, cyber security and cryptography



ENERGY

- Reduction of carbon emissions & sustainable energy
- Nuclear power research
- Reduction & safe disposal of waste energy & energy by-products
- Thermal energy storage and capture



HEALTH

- Biomaterials and devices
- Robotics for surgical and assistive technologies
- Imaging, bio-sensing technologies
- E-Health
- Smart drug delivery and therapeutics



ENVIRONMENTAL

- Sustainable and renewable materials
- Wastewater detection, treatment and recycling
- Nanowire R&D for high-efficiency solar cells
- Clean fuels and fuel cells



INFRASTRUCTURE

- Resilient, next-generation structural materials
- Advanced forecasting and risk management
- Location-aware construction



TRANSPORTATION

- Electrification & autonomous vehicle policy and R & D
- Critical safety software
- Automotive tracking & control
- Advanced alloys and corrosion protection

Invest in excellence with Scientific Research & Experimental Development Tax Incentive Program

Funds spent on Canadian university research are eligible for tax credits through programs such as the Scientific Research & Experimental Development (SRED) Tax Incentive Program, the largest single source of federal government support for Industrial Research and Development in Canada. Any business involved in basic or applied research, or in developing new and improved materials, devices, products or processes may be eligible. Visit www.cra.gc.ca/srec-assessment for more details.

