HEALTH RESEARCH



Applied Research in Action

IDEAWORKS collaborates with sector partners to catalyze sector challenges into real-world change



















Mohawk Health Research

Mohawk Health Research brings together:

- MEDIC
- School of Health
- Centre for Integrated and Advanced Medical Imaging (CIAMI)
- Centre for Healthcare Simulation
- Centre for Professional Advancement

Mohawk McMaster Institute for Applied Health Sciences



mHEALTH & eHEALTH DEVELOPMENT AND INNOVATION CENTRE



Mohawk Health Research

Imaging Research

<image>







Device Integration











Imaging Research and Innovation

Mohawk College School of Health and School of Medical Imaging has a diverse portfolio which contains a unique partnership with McMaster University and our community partners.

The Centre for Integrated and Advanced Medical Imaging (CIAMI) is a comprehensive diagnostic imaging facility for students, educators, researchers, clinicians, technologists, and the wider community.

CIAMI is a key addition to an already rich research ecosystem featuring Mohawk, McMaster and Hamilton's hospital partners and collaboratively supports the integration of research competencies into the training of interdisciplinary teams.





Imaging Research and Innovation



Enable New Research Directions

With access to world-class equipment and technologies, CIAMI creates the space for researchers in our community to make remarkable strides creating knowledge and lasting impact, advancing research in the field of medical imaging.

CIAMI is proud to be the home of a new SIGNA Premier 3.0T MRI which is the second unit of this kind installed in Canada.

With access to our MRI, CIAMI enables groundbreaking research and educational opportunities for neurological research including spectroscopy, fMRI, DTI, advanced cardiac research and breast imaging.





Centre for Integrated and Advanced Medical Imaging

Imaging Research and Innovation





Point of Care Ultrasound Applications Lab

Supports the testing and adoption of leading-edge medical imaging technologies. Equipped with both portable ultrasound machines and units that communicate directly with a PACS, the specialized space and technology allows for the seamless sharing of images and information. Capable of general and cardiac imaging, the lab supports applied research that improves clinical practice and patient outcomes.



Medical Radiography Lab

Includes a radiography suite that contains four fully functioning digital x ray rooms, a functioning CT GE dual energy suite as well as computed radiography processing equipment. Our CT, radiography and sonography units communicate with the GE PACs to allow for comprehensive image interrogation.



Imaging Simulation



Ultrasound Simulation tools extend into our imaging suites as well. We have three ScanTrainers using haptic devices to train learners on normal and abnormal obstetrical, gynecological, abdominal and small parts ultrasounds, both normal and abnormal. Learners and researchers can learn to scan using transabdominal and transvaginal haptic devices.

Cardiac Specific Cases can be reviewed on our HeartWorks simulators where learners and researchers can scan normal and abnormal cases both transthoracic and trans esophageal.



BabyWorks is the most recent addition to our ultrasound simulation lab. Learners and researchers can scan pediatric heart, pediatric brain and pediatric abdomen and see both normal and abnormal findings.



Centre for Healthcare Simulation



We can also provide feedback and recommendations to help improve products and processes to support improved clinical outcomes. Our Centre for Healthcare Simulation and Research is equipped to serve as a fully functioning medical facility.

It includes:

- 6 simulation suites with fleet of high fidelity mannequins
- 2 "sim flex rooms" for Virtual Reality / lowmedium fidelity simulations / debriefing
- 2 ADL (activities of daily living) apartments
- Video/audio capture in all spaces
- Debriefing facilities

These labs support applied research projects focused on healthcare technology development; including the testing and validation of new equipment in preparation for deployment into medical facilities.



MEDIC Digital Health

Digital Health Technology Development

- Healthcare domain expertise
 - Patient-centric
 - Privacy and security
 - PHIPA/HIPAA
 - Big data implications
 - Business of health care
- Mix of full-time professionals and student interns
- Professional project management
 - ISO 13485 and IEC 62304 compatible
- No claim on resulting IP
- Access to ARD, OCI, SOPHIE and other funds



mHEALTH & eHEALTH DEVELOPMENT AND INNOVATION CENTRE





MEDIC Robotic Solutions



Meet Temi, the core of our health care robotic solutions work



At MEDIC Robotic Solutions, we are developing robotic applications, primarily for organizations delivering health care. Prototypes in development include greeter bots, wayfinding, assisted living, and a nursing station assistant.

Click on the image to watch a video of our work at St. Joseph's Lifecare Centre



Visit our Assisted Living Simulation at the Institute for Applied Health Services in Hamilton to see demonstrations of what our Temi robots can do.





Customised Training Solutions



As a leading academic partner, the Marinucci Family Centre for Professional Advancement (CPA) is dedicated to supporting the emerging and evolving needs of the workforce through cutting-edge programming.

Our expertise lies in crafting flexible educational offerings that can be delivered online, in-person, or using a blended approach. Whether you're experiencing a workforce problem, staffing challenge, or skills gap, our team is happy to explore customized training solutions to suit your unique needs.

Our unique model of flexible education enables us to extend our impact beyond geographical limits, driving workforce transformation and innovation on a global scale.

CENTRE FOR PROFESSIONAL ADVANCEMENT

HEALTH RESEARCH

Contacts

Doug Ward: MEDIC Candice Watson-Veevers: CIAMI Julia Hansen: Simulation Centre Laura Thomas: AD Medical Imaging Cristina Gage: IDEAWORKS Fergus McKee: MEDIC douglas.ward4@mohawkcollege.ca candice.watson-veevers@mohawkcollege.ca julia.hansen@mohawkcollege.ca laura.thomas3@mohawkcollege.ca cristina.gage@mohawkcollege.ca fergus.mckee@mohawkcollege.ca