

20 ANS
YEARS

C I R
M M T



Le génie pour l'industrie

CIRMMT is a multi-disciplinary, multi-institutional research group that aims to provide a cutting-edge environment for integrated studies of music, acoustics, cognitive science, engineering, digital media and performance sciences. As the foremost Centre in Canada for research in the science and technology of music and sound, CIRMMT develops new possibilities for scientific research, as well as creation, performance and dissemination of music with a major artistic, social and economic impact. Research within CIRMMT's community spans a wide range of topics including how music is created, performed, recorded, transmitted, and received. It also encompasses the ways in which music and sound interact with vision and haptics.

Our Community:

50 academic members
80+ collaborators (academics, professionals)
200+ graduate students (engineering, neuroscience, music, psychology)

Our Network:

4 partner institutions (McGill, Université de Montréal, Université de Montréal, ETS)
5 affiliated institutions (Concordia, UQAM, INRS-EMT, Université Laval and Marianopolis College)



Available Services

User interface development, usability testing

Product and prototype validation:
protocol design and refinement, IRB
application preparation and management, test
campaign management and execution, results
analysis, reporting

Dissemination and outreach: publication of
results in scientific journals, presentations in
interdisciplinary conferences

Technology assessment

Product specification and validation for OEM

Product testing

Expertise & Resources

Expertise

Technology assessment, systems specification, tests design and implementation, user experience evaluation.

Resources

Highly qualified technical staff;
Technical project management;
Access to academic members' expertise;
Unique research facility: infrastructure & equipment;
Access to a large pool of beta-testers.

Infrastructure & Equipment

Six research laboratories, Office Spaces, Meeting Room

Specialized equipment, including:

Sound isolated enclosure
Portable screening audiometer
Sound level meter
Acoustic coupler
Waveform generator/analyzer
Real-time, dual-domain audio analyzer
Electro-acoustic test bench equipment
Artificial test fixtures
Rapid prototyping environment



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in Music Media and Technology

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Laboratories



Critical Listening Laboratory

ITU standard room with multichannel and stereo audio, critical listening, evaluation, and technical ear training research.



Spatial Audio Laboratory

Hemi-anechoic room, room acoustics measurements and perception, diffusion, directivity, and spatialization studies.



Performance and Recording Laboratory

Sound recording of individual performers, motion capture, virtual reality applications.



Perceptual Testing Lab.

Experimentation on music and sound perception.



Audiovisual Editing Lab (Maurice Pollack Foundation).

HD video editing, preparation of test materials, media and demo preparation, content for archiving, viewing/listening space.



Immersive Presence Laboratory.

Multi-speaker audio, motion capture, multimodal display and presentation.



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Equipment pool

Audio Equipment

Measurement and recording microphones, audio preamps/converters, multi channel processors, portable audio recorders, workstations and measurement software, multitrack analog/digital mixing consoles, wireless microphones, headphones and preamplifiers, active loudspeakers, power amplifiers

Video Equipment

HD cameras, HD videocameras, video editing equipment, portable editing stations

Motion Capture

26 high-resolution / high-speed motion capture cameras, motion capture analysis software

Biometrics

Portable bio-feedback stations (ECG, GSR, EMG), wireless eye-tracking, electromyography, and electroencephalography

Measurement Equipment

Acoustic measurement: head and torso simulator, sound pressure field analyzer,
Electrical measurement: real-time, dual-domain audio analyzers
Physical measurement: force plates, gait analysis, accelerometers

Rapid Prototyping

3D printers (FDM), laser cutter (80W)

Musical Instruments

Keyboards, digital pianos, MIDI controllers

Contact us for more information or a site visit:

services@cirmmt.mcgill.ca

Past collaborations



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www.cirmmt.org

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