



**BRAINWAVES**  
HUMAN NEUROSCIENCE  
RESEARCH GROUP

**RIDING THE WAVE TO THE OPENING OF  
THE HUMAN NEUROSCIENCE CENTRE**

**MARCH 31, 2023  
MAIN AUDITORIUM,**



FACULTY OF MEDICINE

# AGENDA

8:00	<b>Arrival</b>
8:30	<b>Welcoming Remarks</b>
<b>ROUND TABLE 1</b>	
8:40	<b>MULTIMODAL NEUROIMAGING BIOMARKERS FOR EARLY DISCOVERY OF ALZHEIMER'S DISEASE</b> Dr. Karteek Popuri, <i>Assistant Professor</i> <i>Data and Image Analysis Group (DIAG),</i> <i>Computer Science, Faculty of Science</i> <i>Website: <a href="http://diaglab.cs.mun.ca">diaglab.cs.mun.ca</a></i>
8:55	<b>MIND-CONTROLLED TECHNOLOGIES: SCIENCE FICTION OR REALITY?</b> Dr. Sarah Power, <i>Associate Professor</i> <i>Faculty of Engineering and Applied Science,</i> <i>and Faculty of Medicine</i>
9:10	<b>MIND EMBODIED: THE BRAIN IN AN ACTION-ORIENTED NEUROSCIENCE</b> Dr. Heath Matheson, <i>Associate Professor</i> <i>Collaborative Research in Empirical and Theoretical Embodiment (CREATE) Laboratory, Psychology,</i> <i>Faculty of Science</i>
9:25	<b>MUSIC AND THE AGING AUDITORY BRAIN</b> Dr. Benjamin Zendel, <i>Associate Professor</i> <i>Cognitive Aging and Auditory Neuroscience Laboratory (CAANLab), Faculty of Medicine</i> <i>Website: <a href="http://caanlab.ca">caanlab.ca</a></i>
9:40	<b>ROUND TABLE DISCUSSION</b> Drs. Popuri, Power, Matheson & Zendel
10:00	<b>COFFEE BREAK</b>

## ROUND TABLE 2

10:30	<p><b>THE RELATIONSHIP BETWEEN BODY POSTURE, MOVEMENT, AND PERCEIVED PAIN</b></p> <p>Dr. Diana De Carvalho, <i>Associate Professor SpineLab, Community Health and Humanities, Faculty of Medicine</i></p>
10:45	<p><b>LISTENING TO THE NERVOUS SYSTEM: SURFACE EMG SIGNALS REVEAL THE NEURAL CODE OF HUMAN MOVEMENT</b></p> <p>Dr. Greg Pearcey, <i>Assistant Professor Pearcey Laboratory, School of Human Kinetics and Recreation</i> Twitter: @gregorypearcy</p>
11:00	<p><b>INTENSE EXERCISE: FRIEND OR FOE OF THE NERVOUS SYSTEM?</b></p> <p>Dr. Duane Button, <i>Professor Human Neurophysiology Laboratory, School of Human Kinetics and Recreation</i></p>
11:15	<p><b>EXERCISE IS BRAIN FOOD</b></p> <p>Dr. Michelle Ploughman, <i>Associate Professor Recovery and Performance Laboratory, BioMedical Science, Faculty of Medicine</i> <a href="http://www.drnichelleploughman.com">www.drnichelleploughman.com</a> T: @RaPLab_NL, F: Recovery &amp; Performance Laboratory</p>
11:30	<p><b>WHAT CAN A HEADLESS CHICKEN TEACH US ABOUT WALKING</b></p> <p>Dr. Kevin Power, <i>Professor Human Neurophysiology Laboratory, School of Human Kinetics and Recreation</i></p>
11:45	<p><b>NEUROMUSCULAR RESPONSES TO EXERCISE</b></p> <p>Dr. David Behm, <i>Professor School of Human Kinetics and Recreation</i></p>
12:00	<p><b>ROUND TABLE DISCUSSION</b></p> <p>Drs. De Carvalho, Pearcey, Ploughman, Button, Power &amp; Behm</p>

## THE HISTORY OF THE HUMAN NEUROSCIENCE CENTRE

The idea for the Human Neuroscience Centre originated with Dr. Michelle Ploughman in the mid 2010's. Dr. Ploughman recognized that a number of faculty members at Memorial University were studying neuroscience, with a focus on humans, but they were scattered across multiple disciplines. There were faculty in Human Kinetics and Recreation, Medicine, Psychology, Music, Engineering, Computer Science and at the Marine Institute. Although they were all using similar techniques, and studying a similar population, most of these scientists were unaware of each other. The idea behind the Human Neuroscience Centre was to connect these faculty, their students and their lab infrastructure with a goal of generating synergies that would increase capacity for human neuroscientific research at Memorial University.

Since the idea emerged, this group of dedicated human neuroscientists at Memorial have developed the foundations to make the Human Neuroscience Centre an official part of the research infrastructure at Memorial University. Some of our first activities include a student led journal club, laboratory tours and demonstrations, collaborative research grant applications, special meetings about specific topics in human neuroscience, a number of social activities to help foster new research collaborations, and Brainwaves. In 2022 an application was submitted to the senior administration at Memorial University to become an official university centre. This application has been approved by all participating faculties/schools, and is currently being reviewed by the Senate and Board of Regents. We hope to become an official centre at Memorial University in the coming months.

***So right now, we are Riding the Wave to the Opening of the Human Neuroscience Centre.***

### **Contact information**

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