

CRIR Scientific Conference

Presented by:
Jewish Rehabilitation Hospital (JRH), CISSS de Laval



Centre de recherche interdisciplinaire
en réadaptation du Montréal métropolitain

As part of the "Talking Research" series | Presentations by researchers or postdoctoral fellows on the findings of their research projects

How haptic feedback modulates sensory working memory and emotional engagement during anatomy learning in mixed reality (MR).



Dr. Leila Ali, Neurologist

PhD Student at University of Camerino

PhD research trainee at McGill University Sensorimotor Control Lab

Biography

Dr. Leila Ali is a neurologist, cognitive remediation therapist, and a PhD student in theoretical and applied neuroscience affiliated with the Universities of Camerino, and Pegaso. Her work explores the intersection of neuroscience, neurotechnology, and education, with a focus on immersive digital environments' role in motor and haptic learning, emotions and cognition.

Conference abstract

Haptic feedback has the potential to enhance anatomy training in mixed reality (MR) by engaging multisensory working memory systems and strengthening emotional involvement in learning. This study investigates how tactile cues during manipulation of anatomical structures influence short-term sensory memory encoding (visual, auditory, and tactile), and affective engagement. Using MR brain anatomy tasks, we compare learning outcomes and emotional responses between haptic interaction conditions with and without realistic tactile input. Findings will advance understanding of how touch-based interactions shape cognitive-emotional processing in immersive anatomy education, informing future multisensory design principles for medical training environments.

Date & Time : December 3, 2025
12:00 - 13:00

Contact : Mireia.Carrillo.cissslav@ssss.gouv.qc.ca

Language English

Modality : Hybride

■ **In person:** Jewish Rehabilitation Hospital, Room D 1004

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or

■ **Virtual:** On Zoom. Please register:

<https://us02web.zoom.us/join/72YSBm9jRBO2N?pwd=OqmIpX-tw>

Centre intégré
de santé
et de services sociaux
de Laval

Québec The logo for the Province of Québec, featuring four fleur-de-lis symbols arranged in a 2x2 grid.

The logo for the Jewish Rehabilitation Hospital Foundation, featuring a stylized orange and yellow figure resembling a person or a flame.
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