

# Conférences scientifiques du CRIR

Centre de recherche  
interdisciplinaire  
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du Montréal métropolitain

## Intégration multisensorielle chez les porteurs d'implants cochléaires

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**Alexandre Lehmann** is a cognitive neuroscientist, assistant professor at McGill University, adjunct professor at the Université de Montréal, principal investigator at the Centre for Research on Brain Language and Music (CRBLM) and member of the International Laboratory for Brain, Music & Sound Research (BRAMS). His research program focuses on brain plasticity and sensorimotor integration of audition. As the lead research scientist of McGill's Cochlear Implant Research Program, he and his team use advanced neuro-behavioral paradigms to investigate hearing cognition and outcomes in cochlear implant users, in order to characterize, model and remediate current deficits faced by patients.

Multisensory integration allows complex cognitive tasks from daily life such as focusing on a particular conversation in a cocktail party or dancing to the rhythm of music. It is altered in cochlear implant (CI) users and impacts cochlear implantation outcomes.

The present study is a neuro-behavioral assessment of multi-sensory integration of auditory, visual and motor information, in CI users. We used an innovative, implant-compatible, brain-imaging paradigm to investigate perception and production across the senses. In order to correlate behavioral and brain markers with clinical outcomes, relevant factors were collected: speech scores, duration of profound hearing loss, duration of CI experience, and age of implantation.

The results from this approach might provide cost-effective insight into the type of rehabilitation strategy that is best suited for an individual with significant hearing loss, as well as an objective measurement of multisensory integration that can be tracked longitudinally.



**Le mercredi 15 mai 2019**

12h00 à 13h00

**CIUSSS du Centre-Sud-de-l'Île-de-Montréal — IURDPM**

Pavillon Laurier  
Salle le Plateau (200,1)  
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