UNIVERSITÉ DE GENÈVE

BRAIN & COGNITION SEMINAR

UNIVERSITÉ DE GENÈVE
SWISS CENTER FOR AFFECTIVE SCIENCES

EPFL

campus biotech

UNIVERSITÉ DE GENÈVE
CENTRE INTERFACULTAIRE DE NEUROSCIENCES

Tuesday
January 23, 2024
12:15 to 13:15 pm

Campus Biotech
Room H8-01-D
& Zoom :

https://unige.zoom.us/j/62694444617?pwd=T2wzQWNMMk9DTEVXZFhwRW94RXEwQT09

Meeting ID: 626 9444 4617
Passcode: 617330

Lauri Parkkonen

Department of Neuroscience and Biomedical Engineering

Aalto University

Finland

"Magnetoencephalography now and how to move it forward"

Magnetoencephalography (MEG) provides a unique combination of spatial and temporal resolution for studying the human brain in action. While MEG measurement technology is mature for rigorous basic research and routine clinical investigations, the richness of MEG data is not fully exploited yet but calls for more advanced analysis approaches.
In this talk, I will first cover the neurophysiology underlying MEG signals and the basics of MEG instrumentation. I will then illustrate how artificial intelligence can be used to facilitate the analysis MEG signals, providing examples on error processing, motor imagery and selective auditory attention in the human brain. I will also discuss how such paradigms can be applied in brain–computer interfaces. I will also argue that applying normative modelling and artificial intelligence to MEG signals could help in deriving disease-specific biomarkers.

Host : Prof. Patrik VUILLEUMIER
Faculté de médecine – NEUFO – Rue Michel Servet 1 – CH 1205 Genève
Campus Biotech – Chemin des Mines 9 – CH 1202 Genève