

Workshop on EEG/ERP Analysis October 20-21, 2022

Centre of Behavioural and Cognitive Sciences University of Allahabad

Venue

National Neuroimaging Facility
Centre of Behavioural and Cognitive Sciences
Senate Campus (Opposite Krishna Coaching)
University of Allahabad
Prayagraj – 211 002

About the workshop

Electroencephalography/Event related potentials (EEG/ERP) is a noninvasive measurement of electrical activity produced by the brain as recorded from the electrodes placed on the scalp and ERP measures the time course of cognitive processes. This workshop will focus on hands-on training in the acquisition and analysis of EEG/ERP data. There will be a session to demonstrate EEG data acquisition including resting EEG data and task-based EEG/ERP data. We will go in detail through the preprocessing steps required before the data can be analyzed. In data analysis, we will go through basic event-related potential methodology, as well as oscillatory analysis. Whereas event-related potentials are useful for event-related experiment designs, oscillatory analysis is helpful in scenarios where there are not such clear events. We will discuss both how to compute oscillatory power, as well as different measures of functional connectivity through brain oscillations, which may give a window on how different parts of the brain communicate. Finally, we will discuss how machine learning and other computational methods can be helpful to understand EEG data.

Resource person



Dr. Marieke van Vugt
University of Groningen
The Netherlands

Dr. Marieke van Vugt, Assistant Professor at the Bernoulli Institute of Mathematics, Computer Science, and Artificial Intelligence, University of Groningen, the Netherlands. Dr. van Vugt has a PhD in Neuroscience from the University of Pennsylvania and held a post-doctoral position at Princeton University before heading to the University of Groningen, where she is an assistant professor. Her research focuses on trying to understand why, how and when we mind-wander, using a combination of methods including computational modeling, behavioral experiments, and of course EEG. She also investigates how inter-brain synchrony is or is not relevant for social cognition in contexts as varying as tacit coordination, debating Tibetan Buddhist monks and dancers.

No. of seats: 25

Participants: Advanced Masters, PhD students and Postdoctoral fellows, with research interests in cognitive science/neuroscience/psychology/cognitive neuroscience

Registration fee: (to be paid on site in CASH)

Masters / PhD Scholars : Rs. 2500/-

Postdoctoral fellows : Rs. 4000/-

Accommodation will be provided to all outstation participants.

Applicants are requested to kindly fill the Google Form <https://docs.google.com/forms/d/13WsgkM2eJj8J1GIEQvElkVPZB3J_c5ALXHdZM3vGR5g/edit?ts=6305eb8d> by September 15, 2022. Students will be notified about the acceptance of their participation by September 20, 2022.

Contact:

Mr. Puneet Kumar Email: puneet@cbcs.ac.in Mobile: +91 90055 91336