

brainbox

initiative

Advanced Applications of tES

Sample Programme

- 10:00** Welcome and introduction
- 10:30** Lecture: **The use of focal stimulation options and multi-electrode montages for targeted stimulation**
- 11:30** Practical session: **Setting up a focal stimulation study:**
Single-channel stimulators
Dedicated multi-channel stimulators
Concentric ring stimulator setups
Choosing the right electrodes
- 13:00** Lunch
- 14:00** Lecture: **Integrated multimodal applications using tES with MRI, EEG, TMS, or NIRS**
- 15:00** Practical session: **Integrated multimodal applications: tES with EEG and NIRS**
- 16:30** Group Q&A session
- 17:00** Wrap up day one

10:00 Lecture: **Using computational neurostimulation to understand what tDCS does**

Introduction of different modelling approaches and why these are relevant:
Current flow modelling
Neural network modelling

11:00 Practical session: **Current flow modelling for tES**

Delegates are encouraged to bring, if available, their own laptop with SimNIBS installed and their own anatomical MRI data:
ROAST current modelling for tDCS
SimNIBS current modelling for tDCS
Neurophet current modelling for tACS
How to use and inspect models of current flow for both systems

13:00 Lunch

14:00 Wrap up sessions: **Methods lab and group discussion**

Discuss and review delegates' concepts and ideas
Discuss the potential and relevance of tES in future research projects

15:00 Practical session: **Neuronavigation for tES**

Using neuronavigation to identify electrode locations with respect to average or subject-specific MRI

16:30 Summary and close