

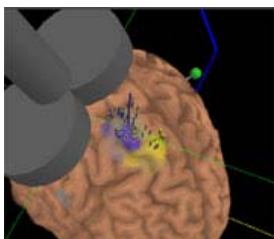
## Toolkit of Cognitive Neuroscience: Transcranial Brain Stimulation

June 24-27, 2014. Nijmegen, the Netherlands



Source: [MagVenture](#),  
C-B60 Butterfly coil

This intensive four-day toolkit course will provide in-depth knowledge on transcranial magnetic stimulation (TMS) and transcranial current stimulation (tDCS/tACS). The course will cover both basic and advanced topics, discussing online and offline approaches of quantification, interference, and modulation of neural activity. We will specifically address multimodal applications of non-invasive brain stimulation, with a special emphasis on concurrent electroencephalography (EEG).



Source: [Localite](#),  
TMS Navigator

The course involves a series of lectures and hands-on training of stimulation application, data acquisition and data analysis. These address fundamental paradigms, such as single-pulse TMS, repetitive TMS, tDCS and tACS, and advanced topics, such as paired-pulse TMS and concurrent TMS-tDCS-EEG, and MEG. Keynote lectures will be announced in the coming months. Please see the program below for more details.

The participation fee is €200 for (PhD) students and €400 for more senior researchers. This includes coffee/tea, Dutch sandwich lunches, and social events. Because of space limitations the number of participants in the hands-on sessions is limited to 30.

Location: Donders Institute for Brain, Cognition and Behaviour  
Centre for Cognitive Neuroimaging  
Kapittelweg 29, 6525 EN Nijmegen

Organizers: Ian Cameron ([ian.cameron@donders.ru.nl](mailto:ian.cameron@donders.ru.nl))  
Dilene van Campen ([a.vancampen@donders.ru.nl](mailto:a.vancampen@donders.ru.nl))

Registration: [www.ru.nl/donders/toolkit2014](http://www.ru.nl/donders/toolkit2014)



Source: [Brain Products](#),  
BrainCap TMS

We are happy to thank our sponsors:





## PRELIMINARY PROGRAM

Tuesday June 24, 2014

### TMS

09.00 - 10.00 **Registration, handouts & coffee**

10.00 - 10.15 **Introduction & overview of toolkit**

Ian Cameron

10.15 - 10.45 **Physics of TMS**

Arno Janssen

10.45 - 11.45 **Experimental approaches & protocols**

Dilene van Campen

Coffee break (15 min)

12.00 - 13.00 **Mechanisms of single-pulse and rTMS**

Lennart Verhagen

Lunch (60 min)

14.00 - 15.00 **Keynote lecture**

**Hartwig Siebner**

15.00 - 15.30 **Safety aspects & guidelines**

Ian Cameron

15.30 - 16.00 **TMS intensities & thresholds**

Marius Zimmermann

Coffee Break (30 minutes)

16.30 - 18.30 **Hands on/Demo TMS**

All

Evening social event



Wednesday June 25, 2014

## TCS

09.00 – 10.00 **Physics and mechanisms of tCS**

Til Ole Bergmann

Break (15 min)

10.15 - 11.00 **Approaches & protocols: TACS vs. TDCS**

Tom Marshall

11.00 - 13.00 **Safety & hands on TCS**

Verena Ly

Lunch (60 min)

14.00 - 14.30 **Applied TCS**

Verena Ly

14.30 - 15.30 **Keynote lecture TCS**

**TBA**

Break (15 min)

15.45 - 16.30 **Cognitive Enhancement & ethics**

Dennis Schutter

Dilene van Campen

16.30 - 18.30 **Discussion Time**

All

16.30 - 17.15 **New products and Demonstrations**

17.15 - 18.30 **Posters & drinks**

*The goal of presenting a poster is to get feedback on any specific proposals/data from our experts. You can choose to present whatever you would like. The organizers will also bring posters of current work or future plans.*



Thursday June 26, 2014

## Advanced application & Multimodal Techniques

09.00 - 09.30 **Connectivity & Plasticity (1)**  
09.30 - 10.00 **Connectivity & Plasticity (2)**  
10.00 - 10.45 **Brain stimulation & imaging**

Dilene van Campen  
Lennart Verhagen  
Tom Marshall

Break (15 min)

11.00 - 12.00 **Keynote Lecture**  
12.00 - 13.00 **Clinical neurophysiology & advanced EMG**

**Dennis Schutter**  
Dick Stegeman

Lunch (60 min)

14.00 - 14.30 **Application of TMS to neurological disorders**  
14.30 - 15.30 **Keynote Lecture**

Ian Cameron

**Alexander Sack**

Break (15 min)

15.45 - 16.30 **TMS-EEG fundamentals**  
16.30 - 18.30 **Hands on TMS-EEG & TCS-MEG demo**

Til Ole Bergmann  
All

Evening Social event

Friday June 27, 2014

## TMS/TCS combined with EEG/MEG

10.15 - 10.30 **Introduction to Fieldtrip**  
10.30 - 11.00 **TMS-EEG analyses**

Jim Herring

11.00 - 12.30 **Hands on TMS-EEG analyses (Part 1)**

Lunch (60 min)

13.30- 15.00 **Hands on TMS-EEG analyses (Part 2)**