



The 2nd international symposium on
**Advancing stimulation precision
medicine of brain disorders**
29th November 2019, 8.00 AM – 5.30 PM
Auditorium 3&4, Hvidovre Hospital
Kettegård Allé 30, 2650 Hvidovre, Denmark



Organizer: Hartwig R. Siebner

Full Professor with special focus on Precision Medicine
Faculty of Health and Medical Sciences, University of Copenhagen
The five-year professorship is sponsored by Lundbeckfonden

Brain diseases are the core health challenge of the 21st century. Most, if not all, brain diseases are “circuit” or “network” disorders in which a failure of specific brain circuits determines the expression and evolution of functional impairments in individual patients. Even though patients may share the same diagnosis, the underlying causal circuit alterations may differ substantially from patient to patient. This calls for brain-circuit based precision medicine of brain diseases. Brain stimulation technologies are rapidly advancing and can specifically target dysfunctional brain circuits in individual patients. This workshop brings together a distinguished panel of international experts to discuss the potential of stimulation-based precision therapies of brain disorders.



Program

8.00-8.10 AM Registration and coffee

8.10-8.15 AM - Welcome notice. Jakob Hendel, Deputy director, Amager Hvidovre Hospital

8.15-8.20 AM - Welcome notice. Jan Egebjerg, Senior Vice President, Director of Science, Lundbeckfonden

8.20-8.45 AM - Introduction - Towards circuit-based precision brain therapies. H.R. Siebner

Advances in targeting brain circuits with brain stimulation

Chairs: A. Thielscher & A. Karabanov

8.45-9.15 AM - Computational dosimetry - from an engineering tool to an integral part of NTBS research. A. Thielscher

9.15-9.45 AM – Rational Design of Precision Seizure Therapy. Z.D. Deng

9.45-10.15 AM - Deep Brain Stimulation: A connectomic approach. A. Horn

Coffee break (30 minutes)

10.45-11.15 AM - A distributional code for value in dopamine-based reinforcement learning.

Z. Kurth-Nelson

11.15 AM -11.45 AM - The new kid on the block: Transcranial precision stimulation with focused ultrasound. L. Verhagen

11.45 AM-12.15 PM - Precision treatment of hearing impairment. J. Hjortkjær

Lunch break (12.15 PM – 1.00 PM)

Targeting network dynamics with TMS-EEG & EEG-TMS

Chairs: H.R. Siebner & M. Rosanova

1.00-1.30 PM - TMS-evoked cortical potentials: the importance of peripheral co-stimulation.

L. Tomasevic

1.30-2.00 PM - TMS-evoked cortical potentials: the importance of personalization. M. Rosanova

2.00 -2.30 PM - Precision brain stimulation in time: zooming in on oscillations. T.O. Bergmann

2.30-3.00 PM - Targeting the precentral mu-rhythm with EEG-informed TMS - the Copenhagen experience. A. Karabanov

Coffee break (30 minutes)

Clinical perspectives of circuit-based transcranial brain stimulation (NTBS)

Chairs: C. Kruuse & D. Herz

3.30-4.00 PM - NTBS-induced sensorimotor plasticity: mechanisms, individual differences, and neglect rehabilitation. J. O'Shea

4.00-4.30 PM - NTBS to study cognition and plasticity - insights from combined NTBS and neuroimaging in the language network. G. Hartwigsen

4.30-5.00 PM – NTBS as circuit therapy in Parkinson's disease. H.R. Siebner

5.00-5.05 PM - Concluding remarks and farewell. H.R. Siebner

Faculty members

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Registration

Registration is required. Participation is free but we will charge a no-show fee of 400 DKK.

Please send an e-mail to Susanne Steffensen (Susanne.Steffensen@regionh.dk).

Venue

Auditorium 3 & 4, Ground level (Level of outpatient clinics),
Hvidovre Hospital, Kettegård Allé 30, 2650 Hvidovre, Denmark

For public transportation please check www.rejseplanen.dk

For more details on how to find auditorium 3 & 4, please check <http://www.drcomr.dk/about/contact-find-us>



The workshop is supported by



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