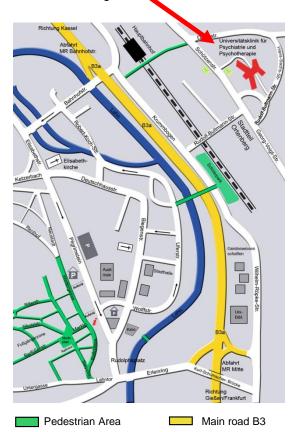
### Location:

Zentrum für Psychische Gesundheit Klinik für Psychiatrie und Psychotherapie Rudolf-Bultmann-Straße 8 35039 Marburg



For room reservation contact

Email: mtm@marburg.de

Pilgrimstein 26, 35037 Marburg,

Tel.: 0 64 21 / 99 12-0, Fax: 99 12-12

Marburg Tourismus und Marketing GmbH,

Organisation:

Dr. J. Sommer, Prof. Dr. A. Jansen Section of Brainimaging Department of Psychiatry Philipps-University Marburg Rudolf-Bultmann-Straße 8, 35039 Marburg

Prof. Dr. R. Stark, Dr. B. Walter BION, Department of Psychology Justus-Liebig University Gießen Otto-Behagel-Straße 10F, 35394 Gießen

## For more information contact:

Ms. Ina Hübener Email: brainimaging@med.uni-marburg.de www.online.uni-marburg.de/quamri/realtime

### **Registration:**

*Symposium* (Sunday, Sept. 13<sup>th</sup>): Participation is free, Email with subject 'symposium' requested: brainimaging@med.uni-marburg.de

Workshop: limited seats. Registration fee 200€ Registration via Email (subject 'workshop') brainimaging@med.uni-marburg.de







Symposium and Workshop

# Biofeedback and Realtime Imaging in Brain Research

**September 13<sup>th</sup> – 15<sup>th</sup> 2015** 

Section of Brainimaging Department of Psychiatry and Psychotherapy Philipps-University Marburg

Die Zertifizierung der Veranstaltung wurde bei der Landesärztekammer Hessen beantragt.

# Program

## Aims and Scope of the Symposium

Neurofeedback is a technique that provides moment-to-moment information about the current level of brain activity. Such information can be used to learn voluntary self-regulation of brain activity. Until recently, neurofeedback was mainly used to train self-regulation of autonomic bodily functions or of specific electroencephalography (EEG) components, for instance to communicate with severely paralyzed patients, to suppress epileptic activity, or to treat symptoms of attention deficit hyperactivity disorder. Recent technological advances in the field of functional magnetic resonance imaging (fMRI) have now made it possible to analyze the data in real-time and thus also to provide neurofeedback based on real-time fMRI (rtfMRI), offering the advantage of targeting spatially localized activity in the range of millimeters across the entire brain.

On the first day of the symposium, renowned experts will give a comprehensive overview on recent developments in biofeedback techniques, with particular emphasis on fMRI and functional near-infrared spectroscopy (fNIRS). On the second and third day, we have organized a workshop in which newly developed realtime imaging tools will be introduced. The workshop will include methodological and practical lectures on several feedback strategies as well as practical hands-on sessions. Sunday, September 13th 2015

## **Scientific Program**

13:00 - 13:30 Welcome Prof. Dr. Andreas Jansen Prof. Dr. Tilo Kircher

13:30 - 17:30 Talks

17:30 - 18:00 Discussion

#### **Confirmed speakers:**

Yury Koush, EPFL and University of Geneva, Switzerland

Joao R. Sato, Universidade Federal do ABC, Santo André / Sao Paulo, Brasil

Ralf Veit, Institute of Medical Psychology and Behavioral Neurobiology, Tuebingen, Germany

Steffen Volz, MRI Physics, Wellcome Trust Centre for Neuroimaging, London, United Kingdom

Monday & Tuesday September 14<sup>th</sup>/15<sup>th</sup> 2015

## Workshop: Realtime Imaging Tools

Jens Sommer, Philipps-University Marburg, Germany Introduction to Realtime Imaging

Joao R. Sato, Universidade Federal do ABC, Santo André / Sao Paulo, Brasil FRIEND, Real-time fMRI pattern decoding and neurofeedback

Yury Koush, EPFL and University of Geneva, Switzerland Matlab based Feedback Toolbox

Jens Sommer, Philipps-University Marburg, Germany The Plugin Interface of Turbo Brainvoyager

Lamija Pašalić / Christoph Schmitz, NIRX, Berlin, Germany Functional NIRS : From experimental planning to realtime visualization.





Brainimaging Marburg

Bender Institute of Neuroimaging Gießen

We are pleased to welcome you in Marburg.

## Sincerely Yours

Dr. Jens Sommer