# Programme

# Satellite symposium

Achieving results

### Tuesday, July 1, 2014

12:00-21:30	Registration
13:30-18:00	Satellite symposium: Tübingen Neurotech
19:00	Opening of MEA Meeting
19:30-20:30	Key-note lecture
20:30-23:00	Welcome reception

### Wednesday, July 2, 2014

8:30-17:30	Scientific sessions with key note lectures
18:30-23:00	Social event: Punt ride on Neckar/Tübingen

#### Thursday, July 3, 2014

8:30-15:00	Poster sessions
16:00-17:30	Scientific session
18:30-23:00	Social event: Conference dinner -
	over the roofs of Reutlingen

### Friday, July 4, 2014

8:30-12:30	Scientific sessions
12:30	Farewell lunch

### Time line for abstracts and manuscripts

Online abstract submission opens
Deadline for abstract submission
(will not be extended)
Notification of abstract acceptance
to authors
Manuscript submission for
Proceedings booklet

### **Online registration 2014**

Jan 13	Early registration opens
After May 1	Regular registration

### Organizer

NMI Natural and Medical Sciences Institute

Meeting Website www.nmi.de/meameeting Check the website regularly for news and details.

Follow us on facebook www.Facebook.com/MEA.meeting

**Contact** meameeting@nmi.de

### Tübingen Neurotech from basic research to medical application

July 1, 2014, 13:30-18:00 Reutlingen, Germany

# MEA Meeting 2014

9<sup>th</sup> International Meeting on Substrate-Integrated Microelectrode Arrays

science, technology and application

July 1-4, 2014 Reutlingen, Germany



### www.nmi.de/neurotech



### www.nmi.de/meameeting

**Organizer** NMI Natural and Medical Sciences Institute



Sponsor



## MEA Meeting 2014 -

science, technology and applications

Microelectrode arrays (MEA) are routinely used in basic and industrial research and development in neuroscience, cardio-vascular research, drug discovery, and neurotechnology.

MEAs have helped to unravel the fundamental physiological functions of the brain, such as memory, learning, circadian rhythms, and neuronal development. Through MEAs, we are beginning to broaden our understanding of cognitive diseases, such as Alzheimer´s disease and epilepsy. Advancements in MEA technology have given new momentum to cardiovascular, stem cell, and retina research.

The biennial MEA Meeting has established itself as the most important international meeting on MEA and Neurochip technology. It is a unique platform for scientific exchange among users and internationally recognized scientists from academia and industry. It attracts biologists, engineers, and physicists from around the globe to Reutlingen.

In 2012, more than 300 scientists with 175 posters and oral presentations attended the meeting. The internationality is also shown in the commercial exhibition with companies from Japan, the USA, Switzerland, and Germany.

In addition to the MEA meeting, in 2014 the 1<sup>st</sup> Tübingen Neurotech Symposium will address current topics in neurotechnology - from basic research to medical applications.

We look forward to welcoming you at MEA 2014.

## Meeting high-lights

The MEA Meeting 2014 will offer a comprehensive overview of the following topics related to current MEA techniques and applications:

### Applications in Life Sciences

- Systems Neuroscience (brain slices, retina, spinal cord)
- Analysis of (sub)-cellular neuron properties
- Signal analysis and statistics (information coding in neural networks)
- Electrical stimulation of single cells and neural tissue
- Primary and stem-cell derived cardiac myocyte cultures
- Pharmacology, toxicology, drug screening
- In vivo recordings and stimulation

#### MEA technology

- New materials & designs
- Fabrication & instrumentation
- Culture techniques

### Key-note speakers

Among the key-note speakers of the last meetings were Hagai Bergman, Pascal Fries, , Peter Fromherz, Lior Gepstein, Andreas Hierlemann, Brian Litt, Shimon Marom, Eberhard Zrenner. The key-note speakers of MEA Meeting 2014 will be published in January 2014. Satellite symposium

## Tübingen Neurotech -

from basic research to medical applications

Neurotechnology offers a wide spectrum of options for diagnosis and therapy of dysfunction of the peripheral and central nervous system. Non-invasive as well as invasive techniques and systems are used to monitor, analyse and modulate brain function. Brain-machine interfaces use neuronal signals to control a robotic arm. Electronic implants help to replace lost sensory function in the ear, the cochlea or in the retina. Invasive and non-invasive brain stimulation is applied in various CNS disorders such as Parkinson's disease, stroke, depression, chronic pain and others.

The 1<sup>st</sup> Tübingen Neurotech Symposium will address current topics in neurotechnology, specifically:

- diagnostic and computational methods,
- technology and application of neuroprostheses,
- brain machine interfaces.

For each discipline a leading key note speaker will open a scientific session, followed by short presentations given by investigators from local research institutes and neuro-technology industry.







