



**retracted**

Introductory Remarks to Symposium 10

## **Brain-machine-interface in paralysis**

*Niels Birbaumer, Tübingen*

The symposium presents an overview on recent advances in non-invasive and invasive brain-machine interfaces (BMI) in paralysis. Clinical and basic science and animal research focused on direct brain-machine connections to translate brain commands in movement and language without involvement of the motor system is presented. Applications to locked-in patients, chronic stroke and brain disorders will be discussed.

**retracted****Symposium 10**

*Thursday, March 21, 2019  
11:30 - 13:30, Lecture Hall 105*

Chair: Niels Birbaumer, Tübingen

- 11:30 **Opening Remarks**
- 11:35 Gabriel Curio, Berlin  
NON-INVASIVE SINGLE-TRIAL EEG DETECTION  
OF EVOKED HUMAN NEOCORTICAL POPU-  
LATION SPIKES (S10-1)
- 12:00 John Donoghue, Geneva, Switzerland  
POTENTIAL CHALLENGES FOR IMPLANTABLE  
BRAIN COMPUTER INTERFACES (S10-2)
- 12:25 Niels Birbaumer, Tübingen  
BCI IN STROKE REHABILITATION (S10-3)
- 12:50 Eilon Vaadia, Jerusalem, Israel  
VOLITIONAL CONTROL OF SPATIOTEMPORAL  
PATTERNS OF NEURONAL SYNCHRONY VIA  
BRAIN-MACHINE INTERFACE (S10-4)
- 13:15 Daniel G. Schmidt, Ulm  
EXECUTIVE EYE MOVEMENT IMPAIRMENT IN  
PRESYMPTOMATIC AMYOTROPHIC LATERAL  
SCLEROSIS MUTATION CARRIERS (S10-5)
- 13:25 **Concluding Remarks**  
Joachim Fährnich, Hamburg (Family and care  
taker of completely paralysed patient)