

Conference Program

Monday May 15 | Morning Session

8:00 - 8:30	Registration and Welcome Coffee	
8:30 - 8:40	Welcome Address	Dr. Urs Frey MaxWell Biosystems, Switzerland
Cutting-Edge Neurotechnologies		
8:40 - 8:45	Opening Remarks	Dr. Marie Obien MaxWell Biosystems, Switzerland
8:45 - 9:15	Scientific Talk	Understanding Cell Diversity in Neuronal Networks with HD-MEA Prof. Dr. Kenta Shimba Mathematical Biology and Bioengineering Lab, University of Tokyo, Japan (<i>online</i>)
9:15 - 9:45	Scientific Talk	Progress in Neuroengineering for brain repair: from <i>in vitro</i> to <i>in vivo</i> studies and beyond Prof. Dr. Michela Chiappalone DIBRIS, University of Genova / Rehab Technologies Lab, Institute Italiano Di Tecnologia, Italy
9:45 - 10:00	Short Talk Selected from Abstracts	Self-organized criticality of cultured neurons on HD-MEA Dr. Dai Akita Hirokazu Takahashi Lab, Research Center for Advanced Technology and Science, The University of Tokyo, Japan
10:00 - 10:30	Coffee Break	
10:30 - 11:00	Scientific Talk	Development of HD-MEAS and combination with other tools Prof. Dr. Andreas Hierlemann Bio Engineering Laboratory, ETH Zurich, Switzerland
11:00 - 11:30	Roundtable	Session Chair Dr. Marie Obien Panelists Prof. Dr. Kenta Shimba, Prof. Dr. Michela Chiappalone, Dr. Dai Akita, and Prof. Dr. Andreas Hierlemann
11:30 - 11:35	Intro to Keynote	Dr. Marie Obien MaxWell Biosystems, Switzerland
11:35 - 12:15	Keynote	Towards Systems Biology of Human Sleep/Wake Cycles: Phosphorylation Hypothesis of Sleep Prof. Dr. Hiroki Ueda Laboratory for Synthetic Biology, RIKEN, Japan
12:15 - 12:20	Closing Remarks	Dr. Marie Obien MaxWell Biosystems, Switzerland
12:20 - 12:30	Group photo	
12:30 - 13:30	Lunch	

Monday May 15 | Afternoon Session

13:30 - 13:50	Non-Scientific Talk	Maximize research impact: working with traditional and social media Dr. Giorgia Guglielmi Science writer and communicator, Switzerland
Brain Development & Controlled Neural Networks		
13:50 - 13:55	Opening Remarks	Dr. David Jäckel MaxWell Biosystems, Switzerland
13:55 - 14:25	Scientific Talk	Leveraging spontaneous activity in human stem cell derived neurons to model neurodevelopmental disorders Prof. Dr. Nael Nadif Kasri Nadif-Kasri Lab, Radboud University Medical Centre, Netherlands
14:25 - 14:55	Scientific Talk	Long-term morphological and functional dynamics of human stem cell-derived neuronal networks Dr. Rouhollah Habibey Busskamp Lab, University of Bonn, Germany
14:55 - 15:10	Sponsored Talk	High density MEA recording of primary rat neuron cultures and human iPSC-derived neuron cultures growing at low density on astrocyte feeder layers Dr. Robert E Petroski Neuroservices Alliances, USA
15:10 - 15:40	Coffee Break	
15:40 - 16:10	Scientific Talk	On the road to achieving brain-on-a-chip using MEA technology: role of connectivity and heterogeneity in the emerging patterns of electrophysiological activity Prof. Dr. Paolo Massobrio DIBRIS, University of Genova, Italy and & National Institute for Nuclear Physics (INFN), Genova, Italy
16:10 - 16:40	Scientific Talk	“Go with the flow” – inducing and tracking action potentials with CMOS MEAs Prof. Dr. Janos Vörös (online) and Jens Duru Laboratory of Biosensors and Bioelectronics, ETH Zurich, Switzerland
16:40 - 17:10	Roundtable	Session Chair Dr. David Jäckel Panelists Prof. Dr. Nael Nadif Kasri , Dr. Rouhollah Habibey , Dr. Robert E Petroski , Prof. Dr. Paolo Massobrio , and Jens Duru
17:10 - 17:15	Closing Remarks	Dr. David Jäckel MaxWell Biosystems, Switzerland
17:15 - 18:00	Transportation to Social Activities Locations	
18:00 - 19:30	Social Activities	
From 19:30	Free Evening	