

1ST

SWISS
EARLY-CAREER
RESEARCHERS
SYMPOSIUM

CAMPUS BIOTECH, GENEVA | 31 JANUARY 2019

Neural population coding
and emergent properties of
cell assemblies

organized by



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PROGRAM

08:00–08:50 Registration; Coffee and croissants

08:50–08:55 Welcome and opening remarks



Keynote lectures

08:55–09:15

Prof. Valerio Mante

Institute of Neuroinformatics, Zurich

09:20–10:20

Dr. Johannes Letzkus

Max Planck Institute for Brain Research, Frankfurt

10:20–10:35

Coffee break



Morning session

10:35–10:50

Dr. Leena Williams

University of Geneva

“Higher-order thalamocortical inputs gate synaptic long-term potentiation via disinhibition”

10:50–11:05

Dr. Gregorio Galiañanes

University of Geneva

“Two-photon imaging of cortical neurons during a multi-directional reaching task in mice”

11:05–11:20

Ms. Ece Boran

University Hospital Zurich / Zurich Neuroscience Center

“Persistent hippocampal neural firing and hippocampal-cortical coupling predict working memory load”

11:20–11:35

Mr. Benjamin Ehret

ETH Zurich

“Stimulus-response mappings in mouse prefrontal cortex population activity”



Morning session (continued)

11:35–11:50

Mr. Max Nolte

Blue Brain Project / EPFL, Lausanne

“Cortical reliability amid noise and chaos”

11:50–12:05

Dr. Marios Abatis

Centre de Neurosciences Psychiatriques 1er, Hopital de Cery, Prilly

“Local excitatory networks in the lateral amygdala support emotional memory learning”

12:05–13:05

Lunch break



Flash talks

13:05–13:12

Dr. Andreas Keller

UCSF, USA

“Feedback receptive fields in neurons of visual cortex”

13:13–13:20

Mr. Antoine Philippides

University of Geneva

“The role of afferent input in neuroprosthetic learning”

13:21–13:28

Mr. Rodrigo Triana-Del Río

University of Lausanne / CHUV, Lausanne

“Oxytocin mediates the switch from passive to active defensive reactions in the central amygdala”

13:29–13:36

Mr. Timothée Proix

University of Geneva

“Decoding of attempted motor movements for locked-in patients using source reconstructed cortical potentials”



Flash talks (continued)

- 13:36–13:43 **Ms. Maria Chernysheva**
Brain Research Institute, Zurich
"The prefrontal-striatal pathway supports working memory maintenance"
- 13:44–13:51 **Ms. Cristina Colangelo**
Blue Brain Project / EPFL, Lausanne
"A framework for multi-scale cholinergic neuromodulation of the neocortex: bridging synapses, dendrites, neurons, and network states"
- 13:52–13:59 **Ms. Raphaela Seeger**
University of Bern
"Time-resolved synaptic cytomatrix and exocytosis architecture"
- 14:00–14:07 **Dr. Baptiste Jaeger**
Brain Research Institute, Zurich
"Understanding the transcriptional changes at the basis of memory formation in the hippocampus"
- 14:07–14:25 Coffee break



Afternoon session

- 14:25–14:40 **Mr. Lukas Oesch**
University of Bern
"Activation of hypothalamic inhibitory neurons during REM sleep stabilizes appetite"
- 14:40–14:55 **Ms. Daniela Zöllner**
EPFL, Lausanne / University of Geneva
"Brain network dynamics provide functional signatures of anxiety in 22q11.2 deletion syndrome"



Afternoon session (*continued*)

14:55–15:10

Dr. Maria Sol Fustiñana Gueler

Friedrich Miescher Institute, Basel

“Neuronal correlates of social interactions in amygdala circuits”

15:10–15:25

Dr. Christoph Pokorny

University of Geneva

“Reconstructed activity of cortical sources during attempted movements in patients with amyotrophic lateral sclerosis”

15:25–15:40

Ms. Andréa Galvez

University of Geneva

“Inferring walking movements from EEG for clinical applications”

15:40–15:55

Dr. Yaroslav Sych

University of Zurich

“Emerging functional connectivity in a mesoscale brain network during sensorimotor task learning”

15:55–16:10

Coffee break



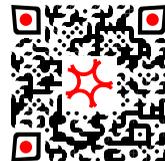
16:10–16:40

Panel discussion

(moderated by Prof. Valerio Mante)

16:40–16:50

Best presentation award and concluding remarks



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