

Bernstein Retreat 2014 – Tutzing

Program

Monday, June 30th

12:30	Lunch	
13:30	Coffee and Poster Preview	
14:10	Welcome and Introduction	<i>Chair: Andreas Herz</i>
14:15	Gaute Einevoll (Norwegian University of Life Sciences, Ås, Norway) Power laws in the brain – a sign of network criticality?	
15:00	Thomas Stark Hearing in spite of being deaf	<i>Chair: Bernhard Seeber</i>
15:25	Anupam Prasad Vedurmudi ICE: How Internally Coupled Ears Enhance Directionality	
15:50	Poster Session and Coffee Break	
17:15	Kay Thurley Real behavior in virtual reality: Experiments with gerbils in VR	<i>Chair: Harald Luksch</i>
17:40	Garrett T Greene Image stabilisation through nonlinear retinal processing	
18:05	Martin Kleinsteuber On learning signal representations and its applications to imaging and vision	
18:30	Dinner, followed by discussions and drinks in the Salons	

Tuesday, July 1st

08:00	Breakfast	
09:00	Anton Sirota High-frequency synchronization in entorhino-hippocampal circuits	<i>Chair: Christian Leibold</i>
09:45	Poster Session and Coffee Break	
11:15	Monika Schönauer Neural correlates of spatial navigation in virtual environments	<i>Chair: Paul MacNeilage</i>
11:40	Paul Maier Learning stimulus statistics: Effects of sequence and correlation	
12:05	Virginia L Flanagan Dynamics of the human brain at rest	
12:30	Lunch	

I – Invariant Representations

- I.1 Processing of motion stimuli by cells in the optic tectum**
Josine Verhaal and Harald Luksch

II – Population Codes

- II.1 Decoding continuous EEG signals using ensemble of SVM classifiers**
Sarah Alizadeh, Hamidreza Jamalabadi, Monika Schönauer, and Steffen Gais
- II.2 Cue integration with reliability encoding, by modulating line attraction dynamics**
Mohsen Firouzi, Cristian Axenie, Stefan Glasauer, and Jörg Conradt
- II.3 Contextual interactions in a non-uniform population code: An application to human color vision**
Christian J Kellner, Olivia Haas, and Thomas Wachtler
- II.4 Neural spike sorting for high-density microelectrode arrays with convolutive ICA**
Christian Leibig, Mads Dyrholm, Thomas Wachtler, and Günther Zeck
- II.5 Neural representations of physical space: Benefits of multi-scale codes & phase precession**
Alexander Mathis, Eric Reifenstein, Johannes Nagele, Richard Kempfer, Susanne Schreiber, Martin Stemmler, and Andreas V M Herz
- II.6 The variability of grid and place cell firing**
Johannes Nagele, Alexander Mathis, Martin Stemmler, and Andreas V M Herz
- II.7 The ICE Model: How Internally Coupled Ears Enhance Directionality**
Anupam Prasad Vedurmudi, Julie Goulet, and J Leo van Hemmen

III – Multimodal Interactions

- III.1 Proprioceptive stabilization of the auditory world**
Daria Genzel, Uwe Firzlaff, Paul MacNeilage, and Lutz Wiegrebe
- III.2 Proprioceptive stabilization of the auditory world: Influence of ear movements on spatial receptive fields in the bat auditory midbrain**
Alexander Warmbold, Paul MacNeilage, Lutz Wiegrebe, and Uwe Firzlaff

IV – Closed-Loop Technologies

- IV.1 Performance of a dynamic clamp system based on discontinuous current clamp synchronized with a software loop**
Hans Reiner Polder, Jens Looser, Bernd Sutor, and Jan Benda

V – Hearing & Neuroprostheses

- V.1 Binaural glimpses at the cocktail party?**
Andrea Lingner, Stephan D Ewert, Benedikt Grothe, and Lutz Wiegrebe
- V.2 Does reverberation perception differ in virtual spaces with unrealistic sound reflections?**
Fritz Menzer and Bernhard U Seeber
- V.3 A link between directional hearing, best hearing and hearing range**
Hans A Schnyder, Simon Schnyder, Dieter Vanderelst, Uwe Firzlaff, and Harald Luksch
- V.4 Optimizing envelope enhancement to improve localization with bilateral cochlear implants**
Bernhard U Seeber, Claudia Freigang, and James W Browne

VI – Navigation

- VI.1 Neural correlates of building a spatial representation in a complex virtual environment**
Svenja Brodt, Dorothee Pöhlchen, Monika Schönauer, Virginia L Flanagin, Stefan Glasauer, and Steffen Gais
- VI.2 Characterizing gerbil hippocampal activity in virtual reality**
Olivia Haas, Alireza Chenani, Stefan Leutgeb, Kay Thurley, and Christian Leibold
- VI.3 Properties of burst spiking in a space coding neuron**
Franziska Kuempfbeck, Felix Felmy, and Andreas V M Herz
- VI.4 Neural mechanisms of illusory motion reversal in Drosophila**
Aljoscha Leonhardt, Matthias Meier, Etienne Serbe, Armin Bahl, and Axel Borst
- VI.5 Bio-inspired optic flow detection using neuromorphic hardware**
Christoph Richter, Florian Röhrbein, and Jörg Conradt
- VI.6 Theta oscillations reflect memory representations in a virtual environment**
Monika Schönauer, Sarah Frankenthal, and Steffen Gais

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General Information

The Retreat of the Bernstein Center Munich will be held at the “Evangelische Akademie Tutzing” (Schloßstraße 2-4, 82327 Tutzing; www.ev-akademie-tutzing.de/).

Talks and posters

The talks will take place in the *Auditorium* and poster sessions in the *Festsaal*. The poster boards are 118.5 cm wide x 146 cm high. Please put up the posters in the coffee break after lunch on Tuesday, July 1st. Remove them during the coffee break on Wednesday, July 2nd.

Accommodation

Check in. On Monday, June 30th you can check in all day long. The rooms will be available from about 12 p.m.

Check out. For those who do not stay for the Population Codes Workshop, please check out on Tuesday, July 1st until 9 a.m.

Internet access

Free internet access is available in the *Auditorium* and *Festsaal*.

From Munich to the Evangelische Akademie Tutzing

Tutzing is located about 40 km in the south of Munich at the western shore the Starnberger See.



By public transport. The village can easily be reached by public transport including regional trains from Munich with destination Garmisch-Partenkirchen or Kochel or the S6 Munich public transport line from Munich to its final destination Tutzing.

It takes you about 10 minutes to walk from Tutzing station to the Evangelische Akademie via Bahnhofstrasse, Hallberger Allee and Hauptstrasse.

By car. Going by car and approaching from Munich you take the motorway A95 towards Garmisch-Partenkirchen with destination Starnberg. In Starnberg you either choose the state road at the lake's western shore in southern direction with destination Tutzing or you take the B2 federal road towards Weilheim with destination Traubing. In Traubing you turn left and follow the signs guiding you to Tutzing.

There are about 50 parking spaces available directly in front of the building.



About BCCN Munich

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