ANDA2018

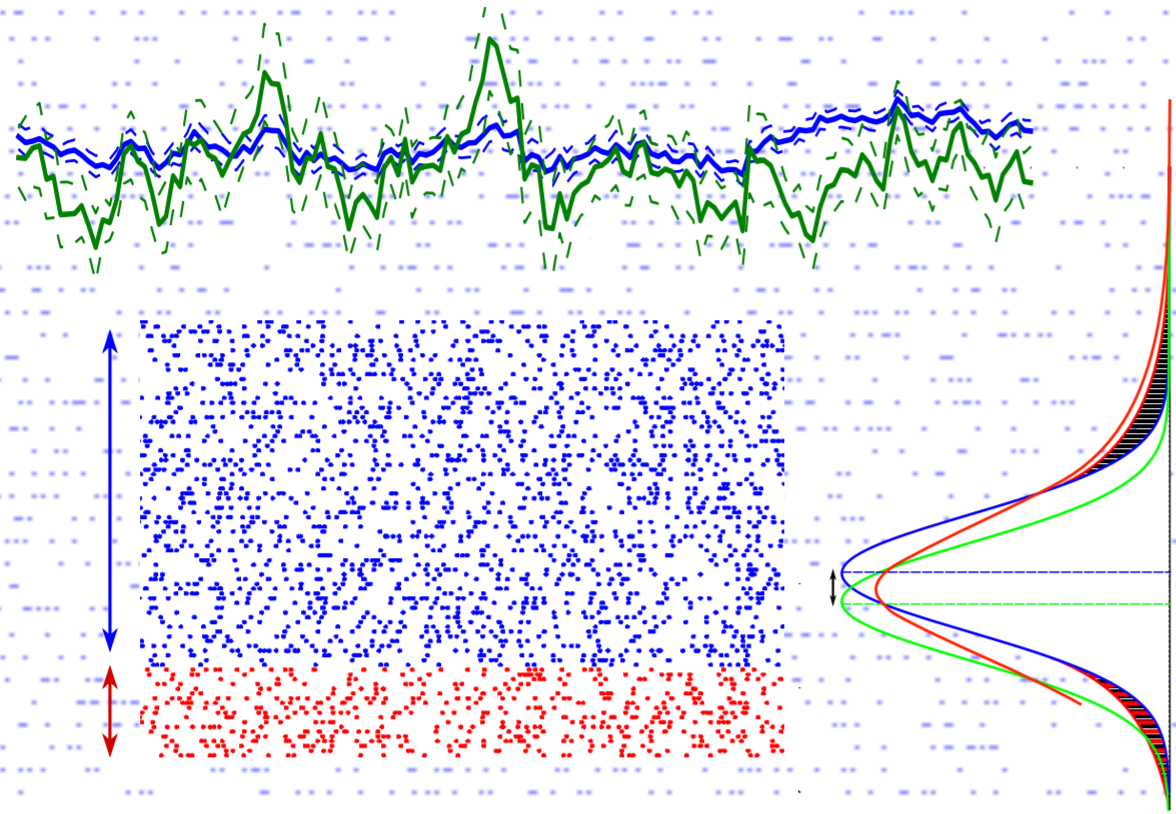## G-Node Advanced Neural Data Analysis Course

March 5 - 22, 2018, Haus Overbach, Jülich-Barmen, Germany

machine learning · spatiotemporal patterns · Unitary Events · massively parallel recording · surrogates · Fano factor · firing rate · reproducibility · state space · coefficient of variation · stochastic processes · Elephant · spike-LFP locking · data mining · decoding · higher-order correlation · population coding

Techniques to record neuronal data from populations of neurons are rapidly improving. Simultaneous recordings from hundreds of channels are possible while animals perform complex tasks. The analysis of such massive and complex data becomes increasingly challenging. This advanced course aims at providing deeper training in state-of-the-art analysis approaches in systems neuroscience. The course provides lectures on advanced techniques in data analytics and data mining methods accompanied with hands-on experience in the analysis of electrophysiological data. Participants will define and perform their own analyses on provided data to solve a challenge.

Faculty

Moshe Abeles, Bar-Ilan University, Israel
Michael Denker, Jülich Research Center, Germany
Alain Destexhe, CNRS Gif sur Yvette, France
Sonja Grün, Jülich Res. Ctr. & RWTH Aachen, Germany
Björn Kampa, RWTH Aachen University, Germany
Christian Machens, Champalimaud Centre, Portugal
Martin Nawrot, University of Cologne, Germany
Yifat Prut, Hebrew University Jerusalem, Israel
Alexa Riehle, CNRS Aix-Marseille, France
Jonathan Victor, Weill Cornell Medical College, USA
Thomas Wachtler, G-Node, LMU Munich, Germany

Organizers

Sonja Grün
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Local Organizers

Michael von Papen
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Application deadline: October 15, 2017

http://www.g-node.org/advanced-course/

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