



Analysis and Models in Neurophysiology

October 16-21, 2011
Bernstein Center Freiburg
University of Freiburg
Germany

Organizers/Speakers:

Stefan Rotter, Bernstein Center Freiburg and Faculty of Biology, University of Freiburg

Ad Aertsen, Bernstein Center Freiburg and Faculty of Biology, University of Freiburg

Sonja Grün, Research Center Juelich

Ulrich Egert, Bernstein Center Freiburg and IMTEK, University of Freiburg

www.bcf.uni-freiburg.de/events/conferences-workshops/20111016-nwgcourse

nwg-course@bcf.uni-freiburg.de

Schedule

NWG-Course „Analysis and Models in Neurophysiology“ October 16-21, 2011

Sunday, Oktober 16, 2011

- 15:15 Welcome at the BCF and introduction of the faculty
- 15:30 Presentation by the participants
- 17:00 City tour of Freiburg
- 18:30 Dinner

Monday, Oktober 17, 2011

- 8:45 Ad Aertsen: Systems and Signals I
- 10:15 Coffee
- 10:30 Ad Aertsen: Systems and Signals II
- 11:45 Lunch
- 13:00 Exercises: Systems and Signals
- 14:30 Coffee
- 14:45 Exercises: Systems and Signals
- 17:15 Special Evening Lecture: Jonathan Victor *“Understanding the Computations in Primary Visual Cortex: Does Tweaking the Standard Model Suffice?”*

Tuesday, Oktober 18, 2011

- 8:45 Stefan Rotter: Neuron Models and Point Processes I
- 10:15 Coffee
- 10:30 Stefan Rotter: Neuron Models and Point Processes II
- 11:45 Lunch
- 13:00 Exercises: Neuron Models and Point Processes
- 14:30 Coffee
- 14:45 Exercises: Neuron Models and Point Processes
- 18:00 End of Exercises

Wednesday, Oktober 19, 2011

8:45 Sonja Grün: Spike Train Statistics and Correlation Measures I
10:15 Coffee
10:30 Sonja Grün: Spike Train Statistics and Correlation Measures II
11:45 Lunch
13:00 Exercises: Spike Train Statistics and Correlation Measures
14:30 Coffee
14:45 Exercises: Spike Train Statistics and Correlation Measures
18:00 End of Exercises

Thursday, Oktober 20, 2011

8:45 Ulrich Egert: Local Field Potentials and Synaptic Plasticity I
10:15 Coffee
10:30 Ulrich Egert: Local Field Potentials and Synaptic Plasticity II
11:45 Lunch
13:00 Exercises: Local Field Potentials and Synaptic Plasticity
14:30 Coffee
14:45 Exercises: Local Field Potentials and Synaptic Plasticity
18:00 Special Evening Lecture: Thomas Stieglitz "*The technical side of neural interfaces*"

Friday, Oktober 21, 2011

9:30 Open discussion with the faculty & tutors
10:00 Group Photo
10:15 Coffee
10:30 Open discussion with the faculty & tutors
11:45 Closing session
13:00 End of Course, handing over course certificates, Farewell

Faculty:

Prof. Dr. Ad Aertsen

Bernstein Center Freiburg
Neurobiology & Biophysics, Faculty of Biology
Albert-Ludwig University, Schänzlestr. 1
D-79104 Freiburg i.Br., Germany
tel: +49 (0)761 203 2718, fax: +49 (0)761 203 2860
aertsen@biologie.uni-freiburg.de
www.brainworks.uni-freiburg.de
www.bcf.uni-freiburg.de



Prof. Dr. Stefan Rotter

Bernstein Center Freiburg
Computational Neuroscience, Faculty of Biology
Albert-Ludwig University, Hansastr. 9a
D-79104 Freiburg i.Br., Germany
tel: +49 (0)761 203 9316, fax: +49 (0)761 203 9559
rotter@bccn.uni-freiburg.de
www.bcf.uni-freiburg.de



Prof. Dr. Sonja Grün

Institute of Neuroscience and Medicine (INM-6)
Computational and Systems Neuroscience
Research Center Juelich
D- 52425 Jülich, Germany
tel: +49 (0)2461 61 9302, fax: +49 (0)2461 61 9460
s.gruen@fz-juelich.de
www.fz-juelich.de/inm/inm-6



Prof. Dr. Ulrich Egert

Bernstein Center Freiburg
Biomicrotechnology, Faculty of Applied Sciences
Albert-Ludwig University, Hansastr. 9a
D-79104 Freiburg i.Br., Germany
tel: +49 (0)761 203 7524, fax: +49 (0)1212 68 54 34 378
egert@bccn.uni-freiburg.de
www.imtek.de/biomikrotechnik/
www.bcf.uni-freiburg.de



Tutors for “Systems & Signals”:

Mihael Zohar
Neurobiology & Biophysics, Faculty of Biology
Schänzlestr. 1
79104 Freiburg, Germany
mihael.zohar@biologie.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/zohar



Ajith Padmanabhan
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
ajith.padmanabhan@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/padmanabhan



Anna Jasper
Neurobiology & Biophysics, Faculty of Biology
Schänzlestr. 1
79104 Freiburg, Germany
anna.jasper@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/jasper



Tutors for “Neuron Models & Point Processes”:

Sadra Sadeh
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
sadra.sadeh@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/sadeh



Taskin Deniz
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
taskin.deniz@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/deniz



Fereshteh Lagzi
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
fereshteh.lagzi@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/lagzi



Tutors for “Spike Train Statistics & Correlation Measures”:

Yury Zaytsev
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
yury.zaytsev@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/zaytsev



Alejandro Bujan
Neurobiology & Biophysics, Faculty of Biology
Schänzlestr. 1
79104 Freiburg, Germany
alejandro.bujan@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/bujan



Moritz Deger
Bernstein Center Freiburg
Hansastr. 9a
79104 Freiburg, Germany
deger@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/deger



Tutors for “Local Field Potentials & Synaptic Plasticity”:

Noah Levine-Small
Biomikrotechnology, IMTEK
George-Köhler-Allee 102
79110 Freiburg, Germany
noah.levine-small@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/levine-small



Samora Okujeni
Biomikrotechnology, IMTEK
George-Köhler-Allee 102
79110 Freiburg, Germany
samora.okujeni@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/okujeni



Steffen Kandler
Biomikrotechnology, IMTEK
George-Köhler-Allee 102
79110 Freiburg, Germany
steffen.kandler@bcf.uni-freiburg.de
www.bcf.uni-freiburg.de/people/details/kandler



Participants

Jan M. Ache
jan.m.ache@googlemail.com

Silvia Maggi
Silvia.Maggi@iit.it

Rocco Andrea Barone
rocco@tnb.ua.ac.be

Marcel Mertes
mmertes@cit-ec.uni-bielefeld.de

Tobias Bockhorst
bockhort@staff.uni-marburg.de

Francisco Nieto Escamez
pnieto@ual.es

Federico Javier Carnevale
federico.carnevale@uam.es

Miha Pelko
mpelko@gmail.com

Tom Franken
tom.franken@med.kuleuven.be

Rasmus Roese
roese@brain.uni-bremen.de

Linus Gisslen
linus@idsia.ch

Ingmar Schwarz
ischwarz@dpz.eu

Gerald Hahn
gerald.hahn@unic.cnrs-gif.fr

Min Seol
min.seol@ana.uni-heidelberg.de

Christian Keine
christian.keine@uni-leipzig.de

Emiliano Torre
emiliano.torre@yahoo.com

Lena Köpke
lena.koepcke@uni-oldenburg.de

Tahir Uddin
tahir@anat.med.unideb.hu

Sze-chim Lee
lewisht1@gmail.com

Qian Xiao
qian.xiao@rub.de

“Systems and Signals”

Further Reading

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4. Cruse H. Neural Networks as Cybernetic Systems. Thieme: Stuttgart, 1996.
5. Further references in Notebook SS11.References.nb

“Neuron Models and Point Processes”

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Further Reading

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“Spike Train Statistics and Correlation Measures”

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