

**Programme of the  
135<sup>th</sup> ICB Seminar on  
“From Networks Structure and Dynamics to Brain Function”**

3 October 2013 – 4 October 2013

**Thursday 3 October**    **9.00-10.00** Registration and welcome coffee

**10.00-10.20** Opening Ceremony, K. Blinowska, J. M. Wójcicki, M. Żochowski

**Session 1**

**Chair: Katarzyna Blinowska**

**10.20-11.20** Opening lecture, Klaus Lehnertz, Department of Epileptology, Medical Center, University of Bonn, Bonn, Germany, *Epilepsy as a large-scale network phenomenon*

11.20-11.40 Coffee break

**11.40-12.20** Michał Żochowski, Department of Physics and Biophysics Program, University of Michigan, Ann Arbor, MI, USA, *From network structure and dynamics to brain function*

**12.20-13.00** Leon Bobrowski, Nalecz Institute of Biocyberneticis and Bioengineering, Polish Academy of Sciences, Warsaw, Poland, *Structuring neural networks for linearly separable aggregation*

13:00 – 14:20 Lunch break

**Session 2**

**Chair: Michał Żochowski**

**14.20-15.00** Maciej Kamiński, Katarzyna Blinowska, Department of Physics, University of Warsaw, Warsaw, Poland, *Dynamical propaqation of brain activity through neural networks*

**15.00-15.40** Leonard Sander, Department of Physics, University of Michigan, Ann Arbor, MI, USA, *Pattern formation in coupled Kuramoto oscillators*

15.40 – 16.10 Coffee break

**16.10-16.50** Daniel Wójcik, Nencki Institute for Experimental Biology Warsaw, Poland, *From network dynamics to local field potentials and back*

**16.50-17.30** Koichi Sameshima, Departamento de Radiologia e Oncologia Faculdade de Medicina Universidade de São Paulo, Sao Paulo, Brasil, *Asymptotic partial directed coherence properties*

**17.30** End Session

Friday 4 October

9.00-9.30 Registration

Session 3

Chair: Leonard Sander

9.30-10.15 **Jurgen Kurths**, Potsdam Institute for Climate Impact Research and Department of Physics, Humboldt University Berlin, Berlin, Germany, *Exploring brain function from anatomical connectivity*

10.15 – 10:40 Coffee break

10.40-11.20 **Sara Aton**, Department of Physics and Biophysics Program University of Michigan, Ann Arbor, MI, USA, *Altered neural circuit activity during sleep-dependent brain plasticity*

11.20-12.10 **Luis Baccala**, Telecommunications and Control Engineering Department Escola Politécnica University of São Paulo, Sao Paulo, Brasil, *The New Era of Brain Connectivity Description through DTF and PDC*

12.10-13.30 Lunch break

Session 4

Chair: Jurgen Kurths

13.30-14.10 **Sarah Feldt Muldoon**, Institut de Neurobiologie de la Méditerranée Marseille, France, *In vitro and in vivo imaging of network structure and dynamics in the epileptic hippocampus*

14.10 – 14.40 Coffee break

14.40-15.20 **Piotr Suffczynski**, Department of Physics, University of Warsaw, Warsaw, Poland, *Generation of cortical high-gamma activity (60-200 Hz) in multilayer neuronal networks*

15.20-16.00 **Andrzej Nowak, Agnieszka Rychwalska**, Institute of Social Studies, Warsaw, Poland, *Task dependent dynamics of functional connectivity*

16.00-16.20 Closing remarks