

Speakers



University of
Zurich^{UZH}

ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Prof. Nancy Andreasen - University of Iowa

Nancy Andreasen has been studying problems in the unification of nosology, phenomenology, and neurobiology for most of her career. She served on both the DSM III and IV Task Forces, but has been critical of their long-term impact. She helped pioneer the use of imaging technologies for studying mental illnesses and more recently has worked on integrating them with genetics.



Prof. Karl Friston - University College London

Karl Friston is a theoretical neuroscientist who, motivated by his research on schizophrenia, invented statistical parametric mapping (SPM), voxel-based morphometry (VBM) and dynamic causal modelling (DCM). He formulated the dysconnection hypothesis of schizophrenia and currently works on models of functional integration in the human brain, incl. a free-energy principle for action and perception.



Prof. Ray Dolan - University College London

Ray Dolan is a pioneer in the combined use of functional neuroimaging and computational methods for investigating the neurobiology of emotion and decision making, respectively. Following seminal studies on how emotion impacts on cognition and on computational and neurochemical mechanisms of decision-making, his research examines the aberrant expression of these processes in psychiatric diseases.



Prof. Shitij Kapur - Institute of Psychiatry, London

Shitij Kapur has been studying the neurobiological basis of psychosis and its treatment. His work has shown that all antipsychotic drugs (typical and atypical) block dopamine D2 receptors and start action within days (rejecting the standard 'delayed onset' hypothesis). This has helped a move towards lower and improved dosage regimes and the development of innovative treatments.



Institute of Biomedical Engineering

Opening Symposium of the Translational Neuromodeling Unit

Public day

18th September 2013, 14:15h

University of Zurich, main auditorium (Aula)

Rämistr. 71, 8006 Zürich



Translational Neuromodeling Unit

Translational Neuromodeling Unit (TNU)

The TNU was established as a joint Chair by the University of Zurich and ETH Zurich in 2012 and forms a new division of the Institute of Biomedical Engineering. The mission of the TNU is to develop and validate mathematical models for inferring subject-specific mechanisms of brain diseases from non-invasive measures of behaviour and neuronal activity. The hope is that model-based quantification of disease processes will help establishing novel diagnostic procedures, enable the redefinition of psychiatric spectrum diseases (such as schizophrenia, depression or addiction) and provide treatment predictions for individual patients.

To achieve this goal, the TNU integrates computational scientists and clinicians under one roof and operates a research clinic for evaluating the practical utility of modeling-based procedures in patient studies. Implementing this novel concept became possible by the combined strengths of and joint support from the University of Zurich and ETH Zurich.

Prof. Klaas Enno Stephan
Director, Translational Neuromodeling Unit



Translational Neuromodeling Unit

Program

Wednesday, 18th September 2013
University of Zurich, main auditorium (Aula)
Rämistr. 71, 8006 Zürich

14:15 - 14:30	Welcome - Klaas Enno Stephan
14:30 - 15:15	Nancy Andreasen (University of Iowa) Problems in identifying the neurobiologies of disorders in the psychosis spectrum
15:15 - 16:00	Karl Friston (University College London) The computational anatomy of psychosis
16:00 - 16:30	Coffee break
16:30 - 17:15	Ray Dolan (University College London) Making sense of psychiatry
17:15 - 18:00	Shitij Kapur (Institute of Psychiatry, London) Why has it taken biological psychiatry so long to deliver a clinical test – and what to do about it
18:00 - 19:00	Drinks (Lichthof)