

PHILOSOPHY AND COGNITIVE SCIENCE RESEARCH COLLOQUIUM



Stiftung
Mercator



Mercator
Research Group

Organization:

Prof. Dr. Albert Newen & Prof. Dr. Markus Werning.

Website: www.rub.de/phil-lang.

Venue: Thu. 3. February 2011, 16-18h, GA 04/187.

All interested students, scientists, and scholars are cordially invited to the following talk of the research colloquium:

Harald Maurer (U Tübingen)

Integrative (synchronization) mechanisms of cognition

One of the core themes in cognitive science consists in the endeavor to achieve an integrated theory of cognition and consciousness which requires integrative mechanisms explaining how the information processing occurring simultaneously in spatially segregated (sub-)cortical areas is coordinated and bound together to give rise to coherent perceptual and symbolic representations. This so-called binding problem, that is, the problem of dynamically representing conjunctions of informational elements, from the most basic perceptual representations to the most complex cognitive representations like symbol structures, appears to be solved by the temporal integrative mechanisms. In other words: One of the coordinating mechanisms seems to be the (temporal) synchronization of neuronal networks. In what follows several models in cognitive science and in cognitive neuroscience which use this mechanism of temporal synchrony, are presented against the background of connectionism, the dynamical system and the self-organization paradigm.

Maurer majored in Philosophy and completed his Masters in 2006 under Prof. Dr. Dr. W. Hoering at the University of Tübingen. He also studied Law, Computer Sciences as well as Psychology, Sociology and Theology.