Learning and memory: mechanisms, functional correlates, control and extinction

4th - 5th of March 2013

Veranstaltungszentrum, Ruhr Universität Bochum

Hosted by:

Denise Manahan-Vaughan
Director IGSN, Speaker SFB 874
Department of Neurophysiology, Faculty of Medicine

Onur Güntürkün
Speaker Extinction Learning Group
Biopsychology, Faculty of Psychology

Christian Bellebaum
Neuropsychology, Faculty of Psychology

Boris Suchan
Department of Neuropsychology, Faculty of Psychology
Monday, 4th of March

9:00 Welcome by Michael Hollmann, Speaker of the IGSN and Denise Manahan-Vaughan, Dean of Studies, IGSN

Learning and Memory
Host: Denise Manahan-Vaughan

9:15 Molecular and cellular mechanisms of learning and memory

9:25 German Barrionuevo
University of Pittsburgh, USA
Synapse-specific compartmentalization of signaling cascades for LTP induction in CA3 interneurons

10:05 Brian E. Derrick
University of Texas, San Antonio, USA
LTP and Function of the Direct Entorhinal Projections to Hippocampal regions CA3 and CA1 in vivo

10:45 coffee break

11:05 Functional correlates of learning and memory

11:15 Bruce McNaughton
University of Lethbridge, Canada
Doughnuts in the brain: A toroidal attractor theory of the cognitive map

11:55 Agnes Gruart
Pablo de Olavide University, Seville, Spain
Learning and memory as functional states of the brain

12:35 Brainstorming session with speakers and students

13:05 lunch break (until 14:10)

(Each session will start with a short introduction of topic and speakers)
Monday, 4th of March

Subcortical and cortical control of decision making and information storage

Hosts: Christian Bellebaum and Boris Suchan

14:10 Introduction (1)

14:20 Marijn van Wingerden  Heinrich-Heine-University Düsseldorf, Germany
Good Vibrations: Rhythms and Plasticity in Neural Correlates of Value in Rat Orbitofrontal Cortex

15:00 coffee break

15:20 Tobias Kalenscher  Heinrich-Heine-University Düsseldorf, Germany
Resisting and restricting temptation - neural signatures of willpower and precommitment

16:00 Brainstorming session with speakers and students

16:30 (approx.) end of first conference day

( length of each talk 30 minutes followed by 10 minutes discussion )
Tuesday, 5th of March

9:30  Introduction (2)  “Subcortical and cortical control ....”

9:40  DOMINIC CHENG  Johns Hopkins University, Baltimore, USA
Functional MRI and tDCS Investigations of Human Eyeblink Conditioning

10:20  CRAIG STARK  University of California, Irvine, USA
The role of human hippocampal subfields in pattern separation, aging, and MCI

11:00  coffee break

Extinction Learning and Forgetting
Host:  ONUR GÜNTÜRКÜN

11:30  Introduction

11:40  CYRIL HERRY  INSERM U862, Neurocentre Magendie, University of Bordeaux, France
Amygdala neuronal circuits of fear extinction

12:20  Brainstorming session with speakers and students

12:50  Lunch break  (until 14:00)

14:00  MARIE MONFILS  University of Texas at Austin, USA
Reconsolidation-extinction interactions in fear memory attenuation

14:40  THOMAS AGREN  Uppsala University, Sweden
Removing fear from memories using reconsolidation disruption

15:20  Farewell  (end of conference: 15:30)