



UNIVERSITY OF JYVÄSKYLÄ



ADVANCING BRAIN RESEARCH IN CHILDREN'S
DEVELOPMENTAL NEUROCOGNITIVE DISORDERS



Jyväskylä Winter School on Neural Mechanisms of Learning 28th – 31st January 2016

Venue: Agora Building, Mattilanniemi 2, Jyväskylä

Thursday 28th Jan

- 9:15 – 9:30 Winter school opening (Aud1)
- 9:30 – 11:30 Topic: Learning, development and neurocognitive disorders (Aud1)
 R. Matos: Introduction to eye tracking and applications in developmental studies
 J. Talcott/C. Witton: Neurodevelopment and its disorders
 P. Ghesquiére: Auditory temporal processing theory of dyslexia
- 11:30 – 12:30 Lunch
- 12:30 – 14:00 Topic: Learning, development and neurocognitive disorders (Pulkkinen Hall)
 M. Aro: Comorbidity of dyslexia and dyscalculia
 V. Csepe: Atypical executive functions – a possible core factor of comorbidities
- 14:00 – 14:30 Coffee break
- 14:30 – 16:30 Topic: Learning in the animal brain (Pulkkinen Hall)
 K. A. Kovacs: Optogenetics combined with multi-unit recording in the behaving mouse
 E. Prokic: Sharp waves in a rat model of birth asphyxia
 J. Wikgren: Effects of aerobic fitness on cognitive abilities in rats
 A. Lipponen: Auditory perceptual learning in rodents
 M. Nokia: Hippocampal oscillations and the rate of associative learning
- 18:00 Posters and Get-together party (Pulkkinen Hall)

Friday 29th Jan

- 9:00 – 10:00 Lecture: C. Escera: Learning complex acoustic contingencies in the subcortical auditory pathway (Aud2)
- 10:00 – 10:30 Coffee break
- 10:30 – 11:30 Lecture: J. Csicsvari: Hippocampus and spatial memory formation (Aud2)
- 11:30 – 12:30 Lunch
- 12:30 – 15:00 Topic: MRI and connectivity measures (Pulkkinen Hall)
 D. Smeets: MRI registration and segmentation
 D. Wassermann: Diffusion imaging-based connectivity measures
 Topic: Advanced analyses for brain data (Pulkkinen Hall)
 M. Clerc: Advanced single-trial analyses
 F. Cong: Non-negative tensor factorization
- 15:00 Excursion to Laajavuori





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Saturday 30th Jan

- 9:00 – 10:00 Science communication skills (Pulkkinen Hall)
- 10:00 – 10:30 Coffee break
- 10:30 – 12:00 Science communication skills (Pulkkinen Hall)
- 12:00 – 13:00 Lunch
- 13:00 – 14:00 Lecture: H. Tanila: Mice, mazes and humans - how much do the rodent memory tests translate to human cognition? (Aud3)

- Free program (e.g., Aalto museum, Toivola Old Courtyard, skating)

- 20:00 – 24:00 Farewell Party (Aalto Hall)

Sunday 31st Jan

- 10:00 – 11:00 Lecture: T. Bekinschtein: Transitions of consciousness (Aud3)
- 11:00 – 12:00 Debate: What can we learn of cognition from brain measures in humans and animals? (Aud3)
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 R. Näätänen: Career planning (Pulkkinen Hall)

