

FENS-HERTIE WINTER SCHOOL 2017

"NEURAL CONTROL OF BEHAVIOUR SERIES 1: NAVIGATION"

10-16 December 2017

Obergurgl University Center, Austria

Scientific Chairs: Prof. Henrik Mouritsen, Prof. Nachum Ulanovsky and Prof.
Eric Warrant

Programme

Sunday 10th December

16:30 - 18:00 **Registration & Welcome Drink**

18:00 - 19:30 *Dinner*

19:30 - 22:00 School introduction by co-chairs

Presentation skills lecture & Students introduction

Monday 11th December

08:30 – 10:00 Prof. **Eric Warrant** – introduction lecture
Department of Biology, Faculty of Science, Lund University,
Sweden
Sensory ecology and navigational cues

10:00 - 10:30 *Coffee break*

10:30 - 12:00 Prof. **Marie Dacke**
Department of Biology, Faculty of Science, Lund University,
Sweden
Celestial orientation: from brain to behaviour

12:00 - 16:00 *Lunch – Free time*

16:00 - 17:00 Roundtable discussion

- 17:00 - 19:00 Project work
- 19:00 - 20:30 *Dinner*
- 20:30 - 22:30 Poster session I

Tuesday 12th December

- 08:30 - 10:00 Prof. **Henrik Mouritsen** – introduction lecture
AG Neurosensorik/Animal Navigation, IBU, University of
Oldenburg, Germany
Navigation in birds
- 10:00 - 10:30 *Coffee break*
- 10:30 - 12:00 Prof. **Nikita Chernetsov**
Department of Vertebrate Zoology, Faculty of Biology, St.
Petersburg State University, Russia
Magnetic maps in migratory birds
- 12:00 - 16:00 *Lunch – Free time*
- 16:00 - 17:30 Dr. **Anna Gagliardo**
Department of Biology, Pisa University, Italy
*The role of the olfactory system and the hippocampal
formation in birds' large scale navigation*
- 17:30 - 18:00 *Coffee break*
- 18:00 - 19:00 Roundtable discussion
- 19:00 - 20:30 *Dinner*
- 20:30 - 22:30 Poster session II

Wednesday 13th December

- 08:30 - 10:00 Prof. **Nachum Ulanovsky** – introduction lecture
Department of Neurobiology, Weizmann Institute of Science,
Israel
Spatial cells in the hippocampal formation

- 10:00 - 10:30 *Coffee break*
- 10:30 - 12:00 Prof. **Nachum Ulanovsky**
Neural codes for natural navigation in bats
- 12:00 - 13:00 *Lunch*
- 13:00 - 15:30 Project work
- 15:30 - 17:00 Dr. **Stanley Heinze**
Department of Biology, Faculty of Science, Lund University,
Sweden
*The insect central complex - a conserved brain center for
navigation*
- 17:00 - 17:30 *Coffee break*
- 17:30 - 19:00 Dr. **Vivek Jayaraman**
Janelia Research Campus, Howard Hughes Medical Institute
(HHMI), Ashburn, Virginia, USA
*Navigational attractor dynamics in Drosophila: Going from
models to mechanism*
- 19:00 - 20:30 *Dinner*
- 20:30 - 21:30 Roundtable discussion

Thursday 14th December

- 08:30 - 10:00 Prof. **Peter Hore**
Department of Chemistry, University of Oxford, UK
Radical pair mechanism of magnetoreception
- 10:00 - 10:30 *Coffee break*
- 10:30 - 12:00 Prof. **Henrik Mouritsen**
The biology of magnetoreception
- 12:00 - 16:00 *Lunch - Free time*
- 16:00 - 17:30 Prof. **Eric Warrant**

*The sensory basis of long distance navigation in the
Australian Bogong moth*

17:30 - 18:00 *Coffee break*

18:00 - 19:30 **Prof. Edvard Moser**
Kavli Institute for Systems Neuroscience, Norway
Position coding in the entorhinal cortex

19:30 - 21:00 *Dinner*

21:00 - 22:00 Roundtable discussion

Friday 15th December

08:30 - 10:00 **Prof. Thomas Wolbers**
German Center for Neurodegenerative Diseases (DZNE),
Germany
*Neural and behavioural mechanisms of human spatial
navigation*

10:00 - 10:30 *Coffee break*

10:30 - 12:00 **Prof. David Foster**
Department of Psychology, UC Berkeley, USA
Neural population codes in rodent navigation

12:00 – 13:00 Roundtable discussion

13:00 – 14:00 *Lunch*

14:00 – 15:30 Project work

15:30 – 18:30 Presentation of project work

18:30 – 19:30 Wrap-up & Feedback session

19:30 *Dinner & Farewell party*

Saturday 16th December

Breakfast and departure