



European Sleep Research Society
Sleep Research and Sleep Medicine in Europe



ESRS Sleep Science School "Neural Networks in Sleep": Application and Fellowships

The Sleep Science School is a new ESRS initiative aimed at gathering early career sleep scientists around different fundamental topics, allowing them to gain knowledge, share their work and experience, meet experienced researchers, develop opportunities and create novel networks of excellence.

The focus of the first edition of the ESRS Sleep Science School will be "Neural Networks in Sleep". It will be held in Frejus, a city located on the Mediterranean sea (France), **16 - 21 October 2017**. Pierre-Hervé Luppi and Philippe Peigneux will coordinate this edition.

Both animal and human research will be addressed. The programme will include communications by international sleep experts on specific topics (see below) but also workshop interactive sessions aimed at writing research grants and proposals and stimulate in-depth exchanges between young and experienced researchers. The faculty members will be present during the entire week and available for theoretical and practical discussions with young researchers.

Neural networks in sleep refer to the neurophysiological and neuroanatomical organization of populations of neurons responsible for generating the sleep-waking cycle or implicated in the functions of sleep. It can be investigated both in human and animal using classical approaches such as electrophysiology and neuroanatomy but also new ones like optogenetic or MEG. All these methods are necessary for an in-depth understanding of the mechanisms regulating sleep and to determine how these mechanisms are potentially modulated by daytime experience and/or disrupted in pathological conditions, and subserve or cohere with crucial cognitive functions.

A maximum number of 40 participants will be accepted to the ESRS Sleep Science School.

To participate, you must:

- be a member of the ESRS at the time of application
- be active in sleep research or sleep medicine training at the time of application
- there is no upper age limit for eligibility; however, preference will be given to candidates who are in the early stages of their career.
- pay registration costs (450 € including meal and accommodation).

In order to apply to participate, please send the following:

- Candidate's CV
- Candidate's ID photo
- Candidate's passport or ID
- Candidate's highest degree
- Application deadline is 15 February 2017
- Applications should be sent to the ESRS Secretary; Attention of Maria Wiechmann (maria.wiechmann@esrs.eu)

Applicants who cannot be supported by their laboratory or other sources may also apply for a fellowship to support their participation:

- Funding is open to all nationalities (European and non-European countries). Candidates from low-income countries will be considered first
- The sum awarded by the ESRS will cover justified travel expenses, for a maximum of 400 €
- Registration costs including meal and accommodation costs will be directly covered by the ESRS
- A maximum of eight grants per year will be financed

The ESRS Research Networking Committee will rank the applications both to participate and to get funded.

Philippe Peigneux and Pierre-Hervé Luppi
Organizers of the School

Lino Nobili
ESRS Secretary

Programme of the ESRS Sleep Science School

Monday, 16.10.2017: Arrival and get-together

19.30 – 20.30 Dinner
20.30 – 22.30 Poster hanging and get-together session

Tuesday, 17.10.2017: Day 1

09.00 General programme overview, participants' and faculty presentation, constitution of small groups for workshop activities

09.30 – 10.30 Lecture 1:
Vlad Vyazovskiy - Local and global dynamics of sleep regulation: focus on the use of advanced electrophysiological methods

11.00 – 12.30 Lecture 2:
Anita Lüthi - Mechanisms and functions of thalamo-cortical activities: "in vitro" versus "in vivo" approaches

12.30 – 13.30 Lunch

13.30 – 15.00 Social (free time, games and sport activities)

15.00 – 16.00 "Meet a Faculty" (meetings in small groups, 5 participants maximum with a member of the faculty, for a free exchange period) or Social (free time)

16.00 – 17.30 Lecture 3:
Hans-Peter Landolt - Sleep EEG fingerprints, biomarkers and the genetics underlying (human) sleep phenotypes

- 17.30 – 19.30 Walking Poster Presentation 1 (6 minutes + 4 min discussion/poster; n = 12 posters)
- 19.30 – 20.30 Dinner
- 20.30 – 22.00 Night Sleep Game

Wednesday, 18.10.2017: Day 2

- 09.00 – 10.30 Lecture 4:
Patricia Bonnavion – A review and critic of the new genetic methods applied to the study of sleep networks
- 10.45 – 12.45 Walking Poster Presentation 2 (6 minutes + 4 min discussion/poster; n = 12 posters)
- 12.45 – 13.45 Lunch
- 13.45 – 16.00 Trekking on the sea shore by small groups with informal discussion with the faculty
- 16.00 – 18.00 Workshop activity 1 - Winning Grant and Proposals
- 16.00 – 16.30 Lecture "How to write a successful grant?"
- 16.30 – 18.00 Development of scientific proposals to be presented at the end of the week (by small groups, with partial moderation of faculty members)
- 18.00 – 19.30 Lecture 5:
Victor Spoormaker - fMRI/EEG advantages and pitfalls to study brain networks in sleep and their significance
- 19.30 – 20.30 Dinner
- 20.30 – 21.30 The Pros and The Cons Contest Session 1*

* For Pros and Cons Contest sessions, attendees will be assigned in advance [before the school week] papers holding divergent positions. They will have 20 minutes per contest to try convincing the other part (3 participants in each camp per contest)

Thursday, 19.10.2017: Day 3

- 09.00 – 10.30 Lecture 6:
Philippe Peigneux: Can we identify the neural networks subtending sleep-learning and sleep-dependent memory consolidation mechanisms in human?
- 10.45 – 12.45 Walking Poster Presentation 3 (6 minutes + 4 min discussion/poster; n = 12 posters)
- 12.45 – 13.45 Lunch
- 13.45 – 15.00 Social (free time, games and sport activities)
- 15.00 – 16.00 "Meet a Faculty" (meetings by small groups, 5 participants maximum with one member of the faculty, for a free exchange time period) or Social (free time)
- 16.00 – 18.00 Workshop activity writing project/grant - continued
- 18.00 – 19.30 Lecture 7:
Pierre-Hervé Luppi: Which animal models and methods to study paradoxical sleep functions, genesis and pathologies?
- 20.30 – 21.30 The Pros and The Cons Contest Session 2

Friday, 20.10.2017: Day 4

- 09.00 – 10.30 Lecture 8:

- Raphaelle Winsky-Sommerer – Is pharmacology a dead end to study sleep and treat its pathologies?
- 10.45 – 12.45 Lecture 9:
Alain Destexhe – Can we model the neural networks of sleep?
- 12.45 – 13.45 Lunch
- 13.45 – 16.00 Social (free time, games and sport activities)
- 16.00 – 18.00 Workshop activity - Projects Presentation (15 min/project + 15 min discussion)
- 18.00 – 19.30 Open discussion on how to find postdoc, next steps, career planning
- 19.30 – 20.30 Dinner
- 20.30 – 21.00 Debriefing and feedback session
- 21.00 – Dance party

Saturday, 21.10.2017: Departure

Breakfast and group picture