



6<sup>TH</sup> WINTER RESEARCH MEETING

ASC

Academy of Sleep and Consciousness

The Sleep Science Winter School will be part of the International Academy of Sleep and Consciousness of the University of Bern and Università della Svizzera Italiana, supported by European Sleep Foundation and BENESCO.

Università  
della  
Svizzera  
italiana

*u<sup>b</sup>*

<sup>b</sup>  
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## CONTACT

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## MEETENG VENUE

BY TRAIN

From Bern via Interlaken Ost, to Wilderswil, Lauterbrunnen, Wengen

BY CAR

From Bern to Wilderswil (car park) or Lauterbrunnen (car park) then by train to Wengen



## ACCOMMODATION

HOTEL REGINA

CH-3823 Wengen

[www.hotelregina.ch](http://www.hotelregina.ch)

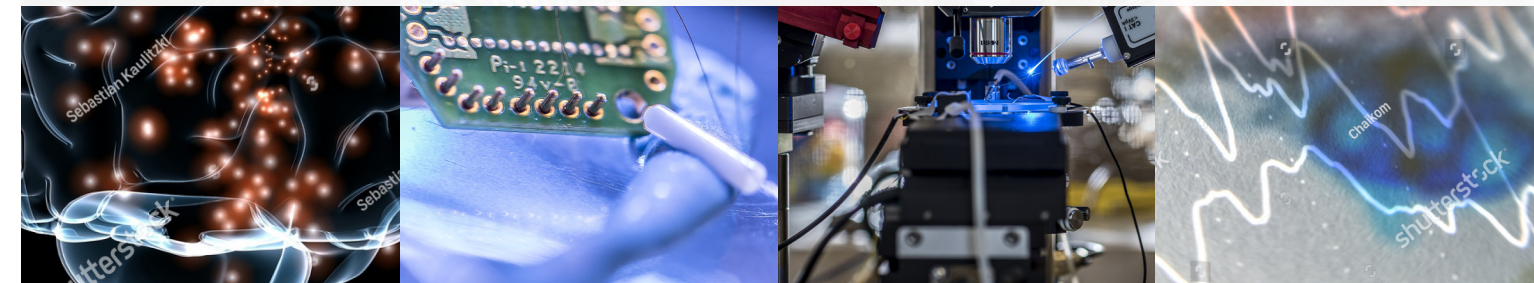
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Designed by



SLEEP SCIENCE  
WINTER SCHOOL



6<sup>TH</sup> WINTER RESEARCH MEETING  
**PRELIMINARY PROGRAM**



**MARCH 1 - 4, 2018**

Hotel Regina  
Wengen



Dear Scientists,

We are very pleased to invite you to the 1<sup>st</sup> Sleep Science Winter School (SSWS), March 1-4 2018, the former BENESCO Winter Research Meeting. From a joint effort of the University of Bern and the Università della Svizzera Italiana, the Academy of Sleep and Consciousness (ASC) was founded. This academy's goal is to provide a high-class postgraduate educational program in sleep and consciousness. The Sleep Science Winter school will be a module of the future educational program with a strong focus on clinical and basic research. Its clinical educational complement will be the Sleep Medical Summer School (SMSS) that will take place in summer 2019 in Lugano. Both modules will be supported by the Bern Network for Epilepsy, Sleep and Consciousness as well as the European Sleep Foundation (ESF).

The 1<sup>st</sup> Sleep Science Winter School offers a diverse program - scientifically but also regarding the different presentation formats. The target audience for teaching courses in the morning are young postgraduate scientists. The scientific sessions in the afternoon provide insights in up-to-date research in the field of sleep research and modelling, chronobiology, states of consciousness and epilepsy covering the research focus of the Bern Network for Epilepsy, Sleep and Consciousness (BENESCO). Highlights of the research meeting are the 3-days course series on Network Neuroscience given by Prof. Flavio Fröhlich, the keynotes on the brain-lung-heart-interaction during sleep as well as on neuroplasticity and sleep given by three scientists with an international respected reputation in their field of expertise: Prof. Dr. Winfried Randerath from the University Witten/Herdecke and the Bethanien Hospital in Solingen, Germany; PD Dr. Jan W. Kantelhardt, Martin-Luther University Halle-Wittenberg, Germany and Prof. Dr. Reto Huber from the University of Zurich. A further highlight is the young scientists' poster session on the Thursday evening.

We are looking forward to an educational and inspiring Sleep Science Winter School and for you to join,

On behalf of the:

BENESCO EXECUTIVE BOARD

- Antoine Adamantidis
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- Reto Huber
- Pierre-Hervé Luppi
- Anita Lüthi
- Marcello Massimini
- Winfried Randerath
- Kaspar Schindler

PRELIMINARY PROGRAM

THURSDAY, MARCH 1 2018

- 12:30 Welcome Lunch
- 13:45 Welcome address
- 14:00 Keynotes on the brain-heart-lung interaction during sleep  
  
Breathing disturbances during sleep more than mechanics - Prof. Dr. W. Randerath, University Witten/Herdecke, Germany  
  
'Fluctuations' scaling and synchronization of heartbeat, respiration and brain wave amplitudes during sleep  
PD Dr. J. W. Kantelhardt, Martin-Luther University Halle-Wittenberg, Germany
- 15:00 Discussion
- 15:30 Break

Scientific session 1  
NON-PHARMACOLOGICAL APPROACHES TO IMPROVE SLEEP AND MENTAL HEALTH

- CHAIR: C. Nissen, M. Hatzinger
- 16:00 Stress, insomnia and psychiatric illness  
M. Hatzinger, Psychiatric Services Solothurn
  - 16:30 Online non-drug treatment to improve insomnia - S. Duss, Bern University Hospital, iSLEEP
  - 17:00 How does cognition influence sleep?  
B. Rasch, University of Fribourg
  - 17:30 Break
  - 18:00 Poster Session / data blitz presentation
  - 20:00 Dinner

FRIDAY, MARCH 2 2018

- 08:30 Short course series in network neuroscience - Prof. Dr. F. Fröhlich, UNC School of Medicine, North Carolina, USA
- 10:00 Break
- TEACHING COURSES
- 10:30 EEG networks and how to analyze them - Dr. C. Rummel, Bern University Hospital
- 11:15 Optogenetics - Prof. Dr. A. Adamantidis, Bern University Hospital
- 12:00 Individual Lunch
- 14:00 Keynote on sleep and neuroplasticity "topic" - Prof. Dr. R. Huber, University of Zurich
- 15:00 Discussion
- 15:30 Break

Scientific session 2  
CHRONOBIOLOGY AND RHYTHMICITY

- CHAIR: A. Albrecht, S. Brown
- 16:00  $\alpha$ - and  $\beta$ -cellular clocks impact on glucagon and insulin secretion in mouse and human models  
C. Dibner, University of Geneva
  - 16:30 Circadian RNA biology from molecular mechanisms to physiological functions  
D. Gatfield, University of Lausanne
  - 17:00 Understanding the circadian neural circuits that regulate daily sleep-wake cycles - B. Collins, ETH Zurich
  - 17:30 Break

Scientific session 3  
ENTANGLING THE UNCONSCIOUS

- CHAIR: C. Bassetti, R. Wiest, Gralla
- 17:45 Aspects of bodily consciousness and illusory own body perceptions in neurological patients - L. Heydrich, Bern University Hospital
  - 18:15 Assessing consciousness in the absence of communication - A. Dermetzi, University of Liège
  - 18:45 Parasomnias - F. Siclari, CHUV Lausanne
  - 19:30 Swiss Alpine Dinner

SATURDAY, MARCH 3 2018

- 08:30 Short course series in network neuroscience  
Prof. Dr. F. Fröhlich, UNC School of Medicine, North Carolina, USA
- TEACHING COURSES
- 10:30 Circadian rhythms across species - Prof. Dr. U. Albrecht, University of Fribourg
- 11:15 Sleep across species - Dr. M. Schmidt, Bern University Hospital
- 12:00 Individual Lunch

Scientific session 4  
BRAIN AND BODY OSCILLATIONS IN SLEEP AND WAKE

- CHAIR: A. Lüthi, A. Adamantidis
- 14:00 Contributions of the basal forebrain to behavioral state regulation  
G. Rainer, University of Fribourg
  - 14:30 Infra-slow oscillations - S. Fulda, EOC Lugano
  - 15:00 Sleep spindles: where they are, what they do  
L. Fernandez, University of Lausanne
  - 15:30 Break

Scientific session 5  
SENSORY CORTICAL NETWORKS DURING WAKEFULNESS & SLEEP

- CHAIR: W. Senn, P. Favaro
- 16:00 Cortical dendritic activity during perception and sleep - M. Larkum, Humboldt University Berlin
  - 16:30 A cortical network that learns to dream  
W. Senn, University of Bern
  - 17:00 A computational model to learn from hallucinations - P. Favaro, University of Bern
  - 17:30 Break

Scientific session 6  
WAYS INTO THE FUTURE OF EPILEPTOLOGY

- CHAIR: K. Schindler, M. Baud
- 17:45 Epileptology 2.0 - K. Schindler, Bern University Hospital
  - 18:15 Cycles in Epilepsy - M. Baud, Wyss Center Geneva
  - 18:45 Multimodal evaluation for epilepsy surgery - networks and structure - C. Rummel, Bern University Hospital
  - Individual evening program

SUNDAY, MARCH 4 2018

- 08:30 Short course series in network neuroscience - Prof. Dr. F. Fröhlich, UNC School of Medicine, North Carolina, USA
- 10:30 Roundtable discussion
- 12:00 Farewell aperitif and end of the meeting