



BENESCO

Bern Network Epilepsy Sleep Consciousness

**LECTURE SERIES ON SIGNAL ANALYSIS
AND BRAIN OSCILLATION IN HEALTH
AND DISEASE**

Introduction by Prof. Dr. Antoine
Adamentidis

Aim

Providing knowledge on brain oscillation in healthy and diseased states and teaching signal analyses methods by MATLAB.

- **Lectures:**

- address oscillations from single neurons to complex neural networks in healthy animals and humans and under conditions of neurological disorders.
- Taught by national and international experts

- **Teaching classes:**

- Introduction to current tools and methods used to acquire brain signals
- practical exercises on signal analysis by MATLAB with solutions (self-study)

Requirements for 2 ECTS-credits

- **Be present:** 10 of 16 classes AND lectures (~70%)
- **Pass exam:**
 - 03.06.2016, 12:30–13:30
 - MC-questions
 - Questions are base on contents of teaching classes (class, slides, test, code)

Optional

- Participation at the 4th BENESCO Winter Research Meeting

When		When	What	Session coordinators/chairs
Thursday	March 10	12:30–13:45	Welcome lunch and welcome address by Claudio Bassetti	
		13:45–15:30	1st scientific session Brain oscillations in health and disease	Antoine Adamantidis (Experimental Neurology, Insel) Kaspar Schindler (Neurology, Insel)
		15:30–16:00	Coffee break	
		16:00–17:30	2nd scientific session Insomnia	Wolfgang Schmitt (Psychiatry, Uni. Bern) Mauro Manconi (Neurology, Lugano)
		17:30–18:00	Coffee break	
		18:00–19:15	Data blitz session Young researchers present their scientific work	Simone Duss (Neurology, Insel)
		19:15	Group picture	all
		20:00	Dinner, Hotel Regina Wengen	
Friday	March 11	07:00	Breakfast	
		08:00–09:45	3rd scientific session The circadian clock: Light, activity and psychiatric disorders	Urs Albrecht (Chronobiology, Uni. Fribourg) Ramin Khatami (Neurology, Barmelweid)
		09:45–10:15	Coffee break	
		10:15–12:00	4th scientific session Lung, heart and brain: the interlink between respiratory and cardiac disorders	Sebastian Ott (Pulmonary Medicine, Insel) Roland von Känel (Psychosomatic Medicine, Barmelweid)
		12:00–17:00	Individual lunch break and sports/social event	
		17:00–18:45	5th scientific session Transcranial magnetic stimulation and neuropsychiatry	Thomas Dierks (Psychiatry, Uni. Bern) René Müri (Neurorehabilitation, Insel)
		19:30	Dinner, Mary's Café, Staubbachbänkli, Wengen	
Saturday	March 12	07:00	Breakfast	
		08:00–09:45	6th scientific session Pain perception and regulation	Thomas Nevian (Physiology, Uni. Bern)
		09:45–10:15	Coffee break	
		10:15–12:00	FOCUS on Consciousness The conscious and unconscious mind	Marcello Massimini (Neurology, Uni. Milan)
		12:00–13:00	Final discussion	all
		13:00–14:00	Farewell aperitif	

Contact

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