

# Nonlinear Dynamics of the Brain: Epilepsy, Consciousness, and Sleep

## COBRA Workshop

2nd - 3rd July 2025

[INSTITUTE OF COMPUTER SCIENCE The Czech Academy of Sciences](#)

(Pod Vodárenskou věží 271/2 182 07 Praha 8, close to

[Ládví](#) station, red metro line C)

Room **318**, 3rd floor

Program:

Wednesday, 2nd July	
Session 1: Epilepsy	
16:00	Welcome Levin at UI
16:30 - 17.00	<i>Seizure cycles in epilepsy</i> <b>Honza Kudlacek</b> (Charles University, Prague)
17:00 - 17:30	<i>Chimera-like states in epilepsy and pre-ictal changes in iEEG</i> <b>Isa Dallmer-Zerbe</b> (COBRA, ICS CAS, Prague)
17:30	Discussions and dinner (dinner reservation at 18.30*)

Thursday, 3rd July	
Session 2: Consciousness	
09:00 - 09:15	Welcome and opening
9:15 - 10:15	<i>Cortical connectivity, local dynamics and stability correlates of global conscious states</i> <b>Levin Kuhlmann</b> (Monash University, Australia)
10:15 - 10:45	<i>Dynamics of fish communication under psychedelics</i> <b>Veronika Langova</b> (NUDZ, Klecany)
10:45 - 11:00	Coffee break

\* **Dinner** reservation on **Wednesday, 18.30** is at [Stanice Ládví](#) (used to be "Lapák")

\* **Lunch** reservation on **Thursday, 12.30** is at [Pizzeria Mexicana Giovanni](#)

Both restaurants are close to [Ládví](#) metro station, about 10min on foot from the institute.

Reservation is under name "**Levin**".

Session 3: Sleep	
11:00 - 11:30	<i>Sleep and spindles</i> <b>Wojciech Goch</b> (COBRA, ICS CAS, Prague)
11:30 - 12:00	<i>Closed-loop stimulation of sleep spindles</i> <b>Filip Cerny</b> (NUDZ, Klecany)
12:00 - 13:30	Discussion and lunch (lunch reservation 12.30*)

Session 4: Non-linearity and AI	
14:00 - 14.30	<i>Non-linearity in the brain</i> <b>Giulio Tani Raffaelli</b> (COBRA, ICS CAS, Prague)
14:30- 15:00	<i>TabPFN: the power of deep learning on tiny datasets</i> <b>Joakim Skarding &amp; Dominik Klepl</b> (COBRA, ICS CAS, Prague)
15:00 - 16:00	Discussions and closing