

LOCATION

Hotel Arvena Reichsstadt

Pastoriusstraße 5, 91438 Bad Windsheim



For the transfer to and from Bad Windsheim a rented coach is available for registered participants:

Departure on **September 21, 2023 at 8:00 a.m.**
at Cauerstraße, Erlangen

Departure on **September 22, 2023 at 5:00 p.m.**
at Hotel Arvena Reichsstadt, Bad Windsheim



Please register online at:
www.ebm.fau.eu/?p=831
by **August 13, 2023**, at the

CONTACT

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Collaborative Research Center
CRC 1540

Exploring Brain Mechanics

1st EBM Retreat

September 21 - 22, 2023

Hotel Arvena Reichsstadt
Bad Windsheim



Thursday, September 21, 2023

09:30 – 09:50 **WELCOME and INTRODUCTION**
Silvia Budday and Paul Steinmann

09:50 – 10:15 **Soheil Firooz, Vasily Zaburdaev (C01)**
In silico modelling of mechanical cell-matrix interactions

10:15 – 10:30 **Bartomeu Perelló Amorós (C02)**
The role of mechanics for neuronal 'plasticity'

10:30 – 10:45 **Kristina Karandasheva (C03)**
The role of mechanics in synchronised neuronal activity

10:45 – 11:00 **Shanice Heidenreich (C04)**
Cellular differentiation in brain tissue-like matrices

11:00 – 12:00 **IMPULSE DISCUSSION**
with a cup of coffee

12:00 – 12:15 **Lars Bischof (C05)**
Molecular mechanisms of neuronal mechanotransduction

12:15 – 12:45 **Laura Ruhland, Yashasvi Verma, Jakob Jordan (X01)**
Model-based reconciliation of ex vivo and in vivo test data

12:50 – 14:10 **LUNCH BREAK**

14:15 – 14:30 **Mathias Öttl (X02)**
Data analysis and machine learning for heterogeneous, cross-species data

14:30 – 14:45 **Markus Lorke (X03)**
Engineering brain tissue-like matrices

Thursday, September 21, 2023

14:45 – 15:00 **Frederik B. Laun (Y)**
Establishing magnetic resonance elastography at FAU

15:00 – 16:00 **IMPULSE DISCUSSION || EBM²**
with a cup of coffee

16:00 – 18:00 **WALK** to the 'Fränkisches Freilandmuseum' Bad Windsheim

18:30 – 20:00 **DINNER**

from 20:00 **JOINT EVENING**
with inspiring conversations

Friday, September 22, 2023

09:30 – 10:15 **EBM Members Plenary Meeting**

10:15 – 10:30 **Jan Hinrichsen (A01)**
In silico modelling of brain malformations

10:30 – 11:00 **Erica Cecchini, Sophia Auer, Stefan Rampp (A02)**
Quantitative characterisation of brain malformations

11:00 – 12:00 **IMPULSE DISCUSSION**
with a cup of coffee

12:00 – 12:15 **Clara Froidevaux (A03)**
In vitro model for the mechanics of early brain development

12:15 – 12:30 **Michael Tranchina (A04)**
The role of mechanics in orchestrating neural lineage

Friday, September 22, 2023

12:30 – 12:45 **Sebastián Ignacio Vásquez Sepúlveda (A05)**
In vivo model for the mechanics of brain development

12:50 – 14:00 **LUNCH BREAK**

14:00 – 14:30 **Oskar Neumann, Stephen Melly (B01)**
In silico modelling of spinal cord regeneration

14:30 – 14:45 **Maria Tarczewska (B02)**
Pre and post metamorphosis spinal cord regeneration in frogs

14:45 – 15:00 **Jana Bachir (B03)**
The determinants of spinal cord mechanics in homeostasis

15:00 – 16:00 **IMPULSE DISCUSSION**
with a cup of coffee

16:00 – 16:15 **Maik Hintze (B04)**
Spinal cord mechanics in a mouse model of multiple sclerosis

16:15 – 16:30 **Daniel Wehner (B05)**
In vivo mechanical manipulation of spinal cord regeneration

16:30 – 17:00 **CLOSURE and OUTLOOK**
Paul Steinmann and Silvia Budday

17:00 **DEPARTURE**