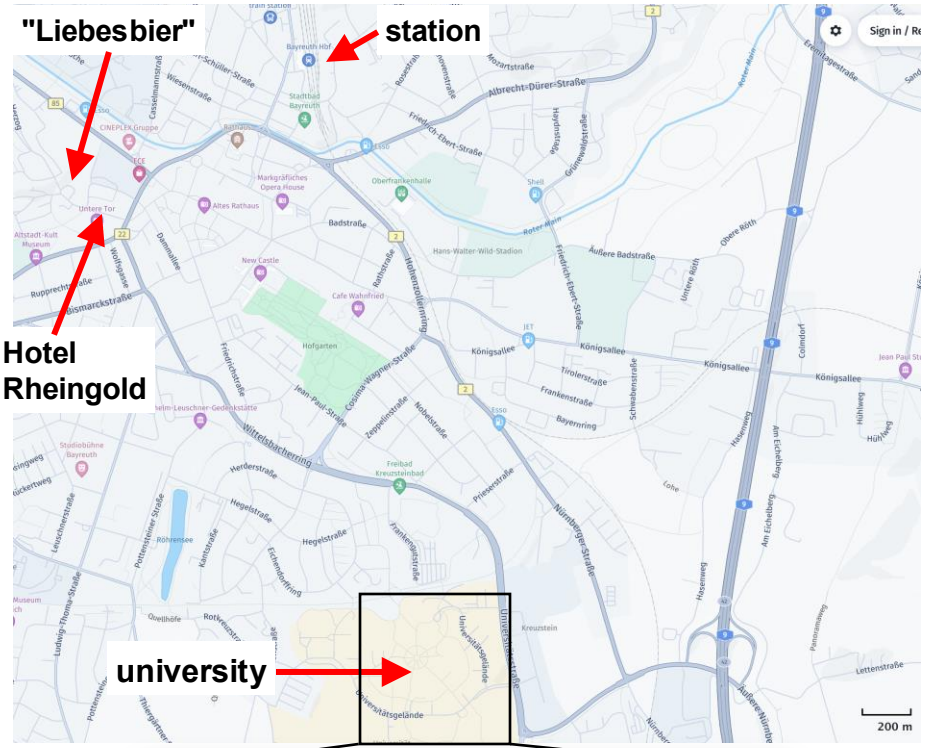
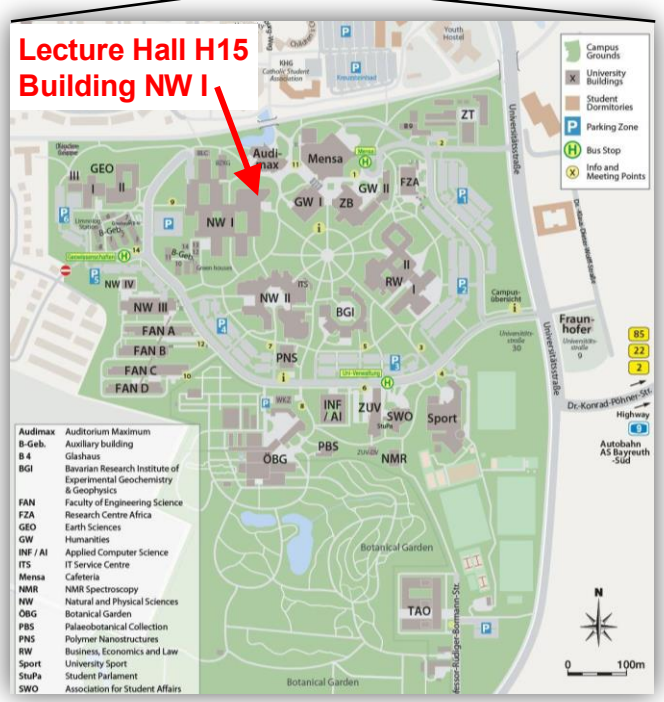


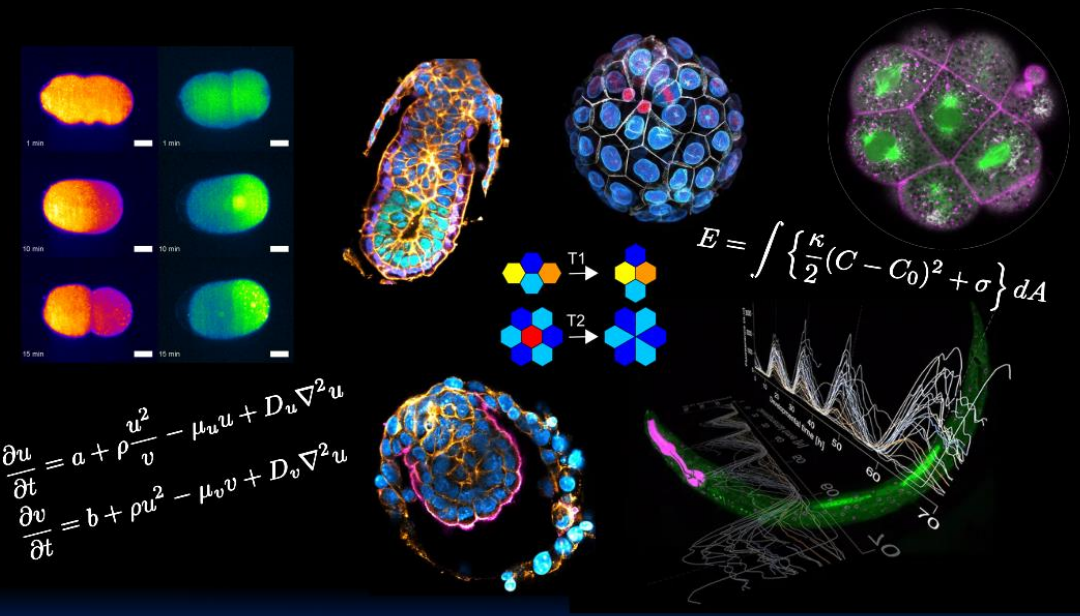


UNIVERSITÄT BAYREUTH

Biological Physics

Biophysics of Development

29.-30. September 2025, Uni Bayreuth



$$\frac{\partial u}{\partial t} = a + \rho\frac{u^2}{v} - \mu_u u + D_u\nabla^2 u$$

$$\frac{\partial v}{\partial t} = b + \rho u^2 - \mu_v v + D_v\nabla^2 v$$

$$E = \int \left\{ \frac{\kappa}{2}(C - C_0)^2 + \sigma \right\} dA$$

INVITED SPEAKERS

Kristian Franze
(MPZPM Erlangen, Germany)
Nathan Goehring
(Francis Crick Institute, London, UK)
Stephan Grill
(MPI-CBG, Dresden, Germany)
Carl-Philipp Heisenberg
(ISTA, Klosterneuburg, Austria)
Takashi Hiiragi
(Hubrecht Inst., Utrecht, Netherlands)
Wolfgang Keil
(Inst. Curie, Paris, France)
Jean-Leon Maitre
(Inst. Curie, Paris, France)
Friedhelm Serwane
(Inst. Biophysics, Ulm, Germany)
Jean-Paul Vincent
(Francis Crick Institute, London, UK)

ORGANIZER: Matthias Weiss

Registration until 30/06/2025 via ***www.ep1.uni-bayreuth.de/en/conference2025***

Registration is free of charge, but the number of participants is limited.
Few contributed talks will be selected from registered participants.

Monday – 29.09.2025

Time	Topic	
9:00	**Welcome**	
9:10 - 10:00	**Carl-Philipp Heisenberg (Klosterneuburg, A)** Mechanochemical feedback loops in animal embryogenesis	
10:00 - 10:50	**Nathan Goehring (London, UK)** TBA	
	Coffee Break	
11:20 - 12:10	**Stephan Grill (Dresden, D)** Chiral Morphogenesis	
	Lunch Break	
13:30 - 14:30	**Short talks** Nike Walther[1] Zoe Lange[3]	 Shane Amadeus Fiorenza[2] Oliver Drozdowski[4]
14:30 - 15:20	**Kristian Franze (Erlangen, D)** Chemo-mechanical cross-talk in brain development	
	Coffee Break	
15:50 - 16:40	**Takashi Hiiragi (Utrecht, NL)** Coordination in mouse development	
16:40 - 17:10	**Benedikt Sabass (Munich, D)** A shape instability in developing biofilms	
19:00	**Conference Dinner (Liebesbier)**	

Tuesday – 30.09.2025

Time	Topic
9:00	**Welcome**
9:10 - 10:00	**Wolfgang Keil (Paris, F)** Dynamics of temporal and spatial cell-fate patterning in the C. elegans larva
10:00 - 10:50	**flash talks** by ENB students (5' each)
	Coffee Break
11:20 - 12:10	**Jean-Leone Maitre (Paris, F)** Mechanics of blastocyst morphogenesis
	Lunch Break
13:30 - 14:20	**Friedhelm Serwane (Ulm, D)** Mechanical probing within neural organoids
14:20 - 15:10	**Jean-Paul Vincent (London, UK)** TBA
	Closing Remarks, Coffee & Farewell

Short talk titles

1. Distinct Sox9 single-molecule dynamics characterize differentiation and reprogrammed states in intestinal organoid models
2. Synchronization of microtubule ends regulates spindle dynamics
3. Inferred Cell Mechanics Inform Mechanistic Model of Tissue Specificatio
4. Three-dimensional force inference in budding intestinal organoids