

Joint STRUCTURES - FI EMS Workshop

FROM STRUCTURES TO FUNCTION

May 9, 2022, 09:00 am

International Academic Forum Heidelberg (IWH, Hauptstr. 242)

Schedule:

Block 1 (09:00 am) ● Engineering Materials

09:00 – 09:20 am Registration & Welcome

09:20 – 09:40 am Jana Zaumseil: *Purified & Functionalized Carbon Nanotubes for Optical & Electronic Application*

09:40 – 10:00 am Peer Fischer: *Engineering on Nano- & Microscales and Emergent Phenomena*

10:00 – 10:20 am Kerstin Göpfrich: *Synthetic Cells: De Novo Engineering with DNA Nanotechnology*

10:20 – 10:40 am Wolfram Pernice: *Photonic Neuromorphic Computing*

– Coffee break –

Block 2 (11:00 am) ● Biological Systems

11:00 – 11:20 am Ilka Bischofs: *Multicellular Structure Formation by the Spore-Forming Bacterium Bacillus Subtilis*

11:20 – 11:40 am Falko Ziebert: *Active Matter – Self-Propulsion of Biological & Synthetic Objects*

11:40 – 12:00 pm Michael Boutros: *Small Molecule Induced Phenotypic Landscapes of Organoids*

12:00 – 12:20 pm Anna Marciniak-Czochra: *Mathematical Modelling of Symmetry Breaking & Pattern Formation*

--- Lunch 12:30 to 02:00 pm ---

Block 3 (02:00 pm) ● Information processing

02:00 – 02:20 pm Anna Wienhard: *Geometric & Topological Methods for Data Analysis*

02:20 – 02:40 pm Simon Anders: *Single-Cell Omics: A Meeting of Biology, Microscale Engineering & Applied Mathematics*

02:40 – 03:00 pm Thomas Henning: *Towards Molecular Complexity*

03:00 – 03:20 pm Ullrich Köthe: *Solving Inverse Problems with Machine Learning*

– Coffee break –

Block 4 (04:00 pm) ● Summary talks and discussion

Chaired by the organizers (Christine Selhuber-Unkel and Ulrich Schwarz)



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ENGINEERING
MOLECULAR SYSTEMS



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