

## **Session Program**

**9-13 Sept 2024**



# **Annual Meeting of the Swiss Physical Society 2024**

## ***Biophysics and Soft Matter***

ETH Zürich  
Gebäude ETA/ETF/ETZ Gloriastr. 35, 8092 Zürich

## Tuesday 10 September

14:00

### Biophysics and Soft Matter: I: New Concepts and Methods

Session | Location: ETF C 1

14:00–14:05

#### **【901】 Introduction: The new focus of contributions to Biophysics and Soft Matter @ SPS**

**Speaker**

Christof Fattinger

14:05–14:30

#### **【902】 A physicist's approach to neuroscience**

**Speaker**

Janos Vörös

14:30–14:45

#### **【903】 Nanopore microscopy for single-cell protein profiling**

**Speaker**

Morteza Aramesh

14:45–15:00

#### **【904】 Orienting fluorophores for highly efficient plasmonic nanoantennas**

**Speaker**

Karol Kołataj

15:00–15:30

#### **【905】 Acoustic metamaterials for biomedical applications: measuring temperature with ultrasounds**

**Speaker**

Lucrezia Maini

15:30–16:00

#### **【906】 The SLS upgrade and its impact on structural biology and drug discovery**

**Speaker**

Prof. Phil Willmott

16:00

16:30

### Biophysics and Soft Matter: II: Materials Preparations and Investigations

Session | Location: ETF C 1

16:30–17:00

#### **【911】 Water in soft confinement of lipidic mesophase**

**Speaker**

Yang Yao

17:00–17:15

#### **【912】 The cryoWriter - a controlled, automated cryo-EM preparation tool**

**Speaker**

Luca Rima

17:15–17:30

#### **【913】 Elucidating the ubiquitin-proline interaction by NMR**

**Speaker**  
Cécilia Siri

17:30-17:45

**【914】 Large-Scale Ordered Block Copolymer Gyroid Films by Solvent Evaporation Annealing**

**Speaker**  
René Iseli

17:45-18:00

**【915】 Understanding oleophobicity through plasma polymer substitutes for PFAS**

**Speaker**  
Dr Astrid Southam

18:00-18:15

**【916】 Structural Colors from Amyloid-Based Liquid Crystals**

**Speaker**  
Tonghui Jin

18:15-18:30

**【917】 Infrared spectroscopy at the nanoscale - AFM-IR of soft materials**

**Speaker**  
Nico Kummer

18:30

## Wednesday 11 September

14:30

### Biophysics and Soft Matter: III: From Molecules and Cells to Medicines

**Session** | **Location:** ETF C 1

14:30–15:00

**【921】 Engineering tissues with architected scaffolds****Speaker**

Marcy Zenobi-Wong

15:00–15:15

**【923】 Ligand identification with DNA-encoded chemical libraries****Speaker**

Christoph Dumelin

15:15–15:45

**【924】 Focal Molography: From Fundamentals to DNA-Encoded Library Screenings and Membrane Protein Target Characterization****Speaker**

Dr Andreas Frutiger

15:45–16:00

**【925】 Improving oral vaccine efficacy through the study of antibody-bacterial glycan interactions and gut dynamics****Speaker**

Dr Milad Radiom

16:00–16:30

**【926】 Advanced Instrumentation Enables Structure-based Drug Discovery on Challenging Membrane Protein Targets****Speaker**

Michael Hennig

16:30

## Thursday 12 September

14:00

### Biophysics and Soft Matter: IV: Physics of Biological Systems I

Session | Location: ETF C 1

14:00–14:30

#### **[931] Biophysical models for molecular motors in vivo**

##### **Speaker**

Prof. Jörg Stelling

14:30–14:45

#### **[932] Cell-cycle coupled evolution of dynamic, multi-state and computational protein functionalities**

##### **Speaker**

Vojislav Gligorovski

14:45–15:15

#### **[933] Patterning, waves and synchronization in arrays of active filaments**

##### **Speaker**

Guillermina Rochelle Ramirez-San-Juan

15:15–15:45

#### **[934] A nuclear jamming transition in embryonic tissues**

##### **Speaker**

Sangwoo Kim

15:45–16:00

#### **[935] Agent-based model for active nematics of cellular tissues**

##### **Speaker**

Mathieu Dedenon

16:00–16:15

#### **[936] Mitochondrial Pearling Distributes mtDNA Nucleoids**

##### **Speaker**

Dr Juan Cruz Landoni

16:15–16:30

#### **[937] Characterizing protein interactions and dynamics in transcription factor condensates in early embryonic Zebrafish**

##### **Speaker**

Eleonora Perego

16:30

17:00

### Biophysics and Soft Matter: V: Physics of Biological Systems II

Session | Location: ETF C 1

17:00–17:15

#### **[941] Event-driven acquisition for content-enriched microscopy**

##### **Speaker**

Willi Leopold Stepp

17:15–17:30

#### **[942] Probing the role of hydrodynamic interactions in metachronal wave formation in dense ciliary arrays**

**Speaker**

Katerina M. Kourkoulou

17:30–17:45

**[943] Symmetry breaking and number control at the onset of centriole duplication****Speaker**

Friso Douma

17:45–18:00

**[944] In situ stoichiometry and organization of human respiratory chain super-complexes****Speaker**

Matthew Domenic Lycas

18:00–18:15

**[945] Resection of DNA in response to permanent DSBs in *S.cerevisiae*****Speaker**

Marco Labagnara

18:15–18:30

**[946] Amino Acids Effect on Protein-Protein Interactions****Speaker**

Pamina Martina Winkler

18:30–18:45

**[947] Spatial organisation of the cell's metabolic engine****Speaker**

Kathrin Laxhuber

18:45–19:00

**[948] Elucidating Distinct Effects of Branching Processes on Mitochondrial Networks****Speaker**

Sheda Ben Nejma

19:00

17:00

**Biophysics and Soft Matter: VI: Physics of Biological Systems III****Session | Location:** ETZ E 6

17:00–17:15

**[951] Maximum likelihood estimation of moments in molecular density optical nanoscopy****Speaker**

Santiago Nicolas Rodriguez Alvarez

17:15–17:30

**[952] Connecting cilia organization to collective cilia dynamics in *Paramecium*****Speaker**

Daphne Laan

17:30–17:45

**[953] Deciphering mechanisms of symmetry breaking in *C. elegans* embryos****Speaker**

Ella Müller

17:45-18:00

**【954】 Crowding induced phase separation in the yeast proteome****Speaker**

Guido Narduzzi

18:00-18:15

**【955】 Chronobiology of DNA Damage Checkpoint Override****Speaker**

Lorenzo Scutteri

18:15-18:30

**【956】 Stabilizing effect of small molecules on colloidal and protein dispersions****Speaker**

Ting Mao

18:30-18:45

**【957】 Impact of spatial structure on bacterial resistance evolution****Speaker**

Cecilia Fruet

18:45-19:00

**【958】 Structure and function of intermitochondrial junctions in primary human T cells****Speaker**

Christian Zimmerli

19:00