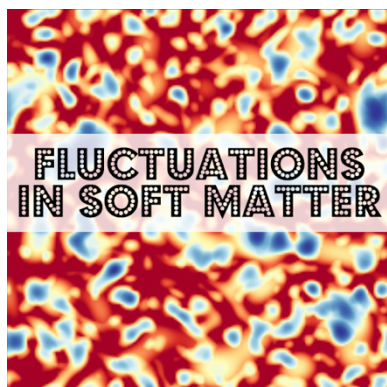


Fluctuations in Soft Matter: Theory Meets Experiment at Large-Scale Research Infrastructures



8–12 Apr 2024

Albano 3: 4204 - SU Conference Room (56 seats)
Albanovägen 29, 114 19, Stockholm

Organizers:

Fivos Perakis, Stockholm University.
Felix Roosen-Runge, Lund University.
Aleksandar Matic, Chalmers

<https://indico.fysik.su.se/e/fluctuations2024>

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Monday, April 8, 2024

Session chair: *F. Perakis*

13:00	<i>Registration</i>
14:00	Anders Nilsson , <i>Experimental studies of water's second critical point</i>
14:45	Beata Ziaja-Motyka , <i>Distinct transient structural rearrangement of ionized water revealed by XFEL X-ray pump X-ray probe experiment</i>
15:15	<i>Coffee Break</i>
15:45	Beatrice Ruta , <i>High pressure induced dichotomy in metallic glass-formers</i>
16:30	Nele Striker , <i>Spatio-temporal correlations to study timescales of higher-order Correlations in liquids and glasses</i>
17:00	<i>Welcome reception (Albano 3: 4204)</i>

Tuesday, April 9, 2024

Session chair: *F. Roosen-Runge, Lund University*

9:00	Anita Girelli , <i>Anomalous Protein Diffusion and Solvent-mediated interactions in Crowded Solutions</i>
9:30	Christian Gutt , <i>Dynamics in dense protein solutions - new insights from XPCS experiments</i>
10:15	<i>coffee break</i>
10:45	Martin Weik , <i>Dynamics of amyloid fibers and their hydration water as studied by neutron spectroscopy</i>
11:30	Mikael Oliveberg , <i>From diffusive protein-protein interactions in live cells to general patterns of functional optimisation across organisms</i>
12:00	<i>lunch break</i>

Session chair: *C. Gutt, University of Siegen*

14:00	Lars Pettersson , <i>Probing Water Structure around Dissolved Argon by EXAFS Spectroscopy</i>
14:45	Yizhi Liu , <i>Nuclear quantum effects on the thermodynamic response functions of a polymorphic waterlike monatomic liquid</i>
15:15	<i>coffee break</i>
15:45	Emanuela Zaccarelli , <i>Novel insights from computer simulations of microgels</i>
16:30	Maddalena Bin , <i>Coherent X-ray Scattering Reveals Nanoscale Fluctuations in Hydrated Proteins</i>
17:00	<i>Poster session, refreshments, snacks and mingle (6th floor)</i>

Wednesday, April 10, 202

Session chair: A. Girelli, Stockholm University

9:00	Anna Strander , <i>Dynamics of concentrated protein solutions and mixtures</i>
9:45	Felix Roosen-Runge , <i>Non-uniform slow-down of proteins in the cytosol - a potential mechanism to tune reaction kinetics</i>
10:15	Coffee break
10:45	Frank Schreiber , <i>Proteins under crowding conditions: From phase behavior to dynamics</i>
11:30	Daria Noferini , <i>Hydrogen Dynamics in pHEMA Hydrogels - How Neutron Spectroscopy Can Help in Preserving Precious Artefacts and Designing New Drug Delivery Systems</i>
12:00	Panel discussion: Science at ESS
12:30	lunch break

Session chair: K. Amann-Winkel, MPI

14:00	Nicolas Giovambattista , <i>The Importance of Fluctuations in Amorphous ice</i>
14:45	Esmée Berger , <i>Dynasor 2.0: From simulation to experiment through correlation functions</i>
15:15	coffee break
15:45	Paola Gallo , <i>Molecular dynamics simulations of supercooled aqueous solutions: from ions to biomolecules, the effect of different solutes on water behavior</i>
16:30	Viktor Kurasov , <i>Fluctuations in the first order phase transition - is the capillary approximation for the critical embryo really suitable for the nucleation rate derivation</i>
19:00	Conference dinner: Stortorgskällaren

Thursday, April 11, 2024

Session chair: A. Nilsson, Stockholm University

9:00	Kyung Hwan Kim , <i>Direct Observation of Dynamic Transition in Bulk Supercooled Water using FELs</i>
9:45	Tobias Eklund , <i>Ultrafast XFEL pump-probe experiments on vapor deposited amorphous ice</i>
10:15	coffee break
10:45	Katrin Amann-Winkel , <i>XPCS at elevated pressures - pressure dependence of glassy dynamics</i>
11:30	Lennart Bergström , <i>Dynamics and structural diversity of concentrated nanoparticle dispersions</i>
12:00	lunch break

Session chair: A. Matic, Chalmers

14:00	Aymeric Robert , <i>Status and Perspective on probing dynamics in disordered matter at MAX IV Laboratory</i>
14:30	Panel discussion Science at MAX IV
15:15	Coffee break
15:45	Heloisa Nunes Bordallo , <i>is artificial intelligence magic dust for big-science facilities?</i>
16:30	Roland Kádár , <i>Orientation across length scales in simple shear</i>
17:00	Poster session, refreshments, snacks and mingle (6 th floor)

Friday, April 12, 2024

Session chair: H. Nunes Bordallo, Un. Copenhagen

9:00	Kristine Niss , <i>Testing isomorph theory with high pressure experiments on liquids and glasses</i>
9:45	Erik Lørup , <i>Experimental evidence for pseudoisomorphs</i>
10:15	coffee break
10:45	Minna Patanen , <i>Aqueous clusters and nanoaerosols studied using X-ray spectroscopy and single particle diffraction imaging</i>
11:30	Riccardo Mincigrucci , <i>Structured illumination microscopy with Extreme Ultraviolet Transient Gratings Extreme Ultraviolet</i>
12:00	Closing remarks