Vienna Soft Matter Day

20th November, 2026

Institute of Science and Technology Austria

Preliminary Schedule

08:30 – 09:10 Shuttle from Schwedenplatz to ISTA

09:10 – 09:25 Registration

09:25 – 09:30 Welcome

09:30 – 09:50 Sue Shi (ISTA) – *Rotational dynamics of acoustically levitated chiral stars*

09:50 – 10:10 Sophie Hermann (Uni Wien) – *Intensity countoscope: quantifying dynamics from intensity correlations in real space*

10:10 – 10:30 Jenis Thongam (TU Wien) – *Phase diagram of self-assembling 2D chiral patchy ellipses*

10:30 – 11:00 Flash talks (see Flash Talk list on page 2)

11:00 – 12:00 Coffee + poster session (see Poster list from page 3 on)

12:00 – 12:20 Andrea de Marco (University of Padova) – *Wave-vector-resolved diagnostics of Fickian non-Gaussian diffusion in an optical speckle landscape*

12:20 – 12:40 Andreas Kretschmer (TU Wien) – *From local structure to thermodynamics and transport of water with machine learning force fields*

12:40 – 13:00 Malina Strugaru (ISTA) – *Liquid crystal elastomer kirigami*

13:00 – 13:10 Group photo

13:10 – 14:30 Lunch

14:30 – 14:50 Margaret Rosenberg (Heinrich Heine University Düsseldorf) – *Active magnetic multipoles*

14:50 – 15:10 Sadia Schülke (Uni Wien) – *Training soft colloidal gels by shear flows*

15:10 – 16:10 Coffee + poster session (see Poster list from page 3 on)

16:10 – 16:30 Flavio Scipione (TU Wien) – *Intercalation and stacking of ligands into patchy polymers*

16:30 – 16:50 Michael Wassermair (ISTA) – *Adapt & evolve: how local adaptivity governs global cell behaviour*

16:50 – 17:10 Eleni Koutsoumpeli (BOKU) – *BIOPHYLM: biofilm on microplastics - a biophysical perspective*

17:10 – 17:15 Closing remarks

17:15 – 19:00 Wine and cheese

19:00 – 19:40 Shuttle from ISTA to Schwedenplatz

Flash talks

1. Markus Gusenbauer (University for Continuing Education Krems) – *Computational modeling of near-surface magnetic particle transport for biosensing applications*
2. Tobias Dwyer (ISTA) – *Immune cell decision making in confinement*
3. Cédrik Barutel (TU Wien) – *Entropic, active, and frictional forces generated by crosslinkers between filaments*
4. Gerhard Jung (University of Innsbruck) – *Collective learning of smart active matter*
5. David Berger (Uni Wien) – *Ionic valency effects on the mechanical unfolding of a DNA g-quadruplex structure*
6. Júlio Santos (Uni Wien) – *Filler restructuring and surface roughness in magneto-active elastomers with magnetically hard versus soft particles*
7. Vanessa Schweidler (TU Wien) – *Formation of binary cluster crystals by ultrasoft particles*
8. Andreas Ehrmann (ISTA) – *Modeling three-state molecular machines walking along a track*
9. John Hoffman (ISTA) – *Binding affinity controls ion transfer in contact electrification*
10. Stefanie Lenzeder (JKU Linz) – *Decoupling crosslink stability and network connectivity in coiled coil crosslinked hydrogels*
11. Maximilian Hammer-Korak (TU Wien) – *DEMOCRIT: from natural-language to molecular geometry generation*
12. Kseniia Petukhova (ISTA) – *Ordering without motors: how filament turnover matters*
13. Fernanda Pérez-Verdugo (ISTA) – *Ordering of growing and proliferating filaments*
14. Tomas Cerda (ISTA) – *Charge in Leidenfrost droplets*
15. Juraj Majek (ISTA) – *Mortal vs immortal filaments: active matter across the tree of life*
16. Polina Popkova (Uni Wien) – *Ionic effects on the conformation and self-association of g-quadruplex DNA*
17. Aritra Bose (ISTA) – *Learning from gradient discontinuities: emergence of multiple memories in spring networks*
18. Susanne Wagner (TU Wien) – *Networks of triblock ellipses: from kagome order to disordered pore networks*
19. Alexander Einschütz Lopez (BOKU) – *Softening of Vero cells induced by measles vaccine virus*
20. Harshit Lakum (Uni Wien) – *Machine-learning surrogate for induction-ring interactions of magnetically capped Janus colloids*
21. Felix Wodaczek (ISTA) – *Mechanics of the FtsZ-ring during bacterial cell division*
22. Martin Buessler (TU Wien) – *Walk through your simulation: a browser-based hub for sharing molecular dynamics trajectories in virtual reality*
23. Majid Moussaei (Uni Wien) – *Growth of MOF membranes on non-conductive porous supports and effect of polymer functionalization*

Posters

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24. Stephan Hufnagl (Uni Wien) – *Active Taylor dispersion of E. coli: effects of chirality and time-periodic flow in microchannels*
25. Ruma Maity (TU Wien) – *Active chiral rotors: hydrodynamics and chemotaxis*

26. Andrea Stöllner (ISTA) – *Using optical tweezers to simultaneously trap, charge and measure the charge of individual aerosol particles*
27. Mau Rojas (ISTA) – *Cell shape through the eyes of geometry processing*
28. Markus Felber (ISTA) – *Contact charge exchange for identical metals*
29. Émeline Laborie (Uni Wien) – *How do microtubules shape the mitotic centrosome?*
30. Annamaria Hovorka (Uni Wien) – *Hydrodynamic simulations of swimming E. coli bacteria*
31. Nataliia Atamas (BOKU) – *Solvent effects on the structure and dynamics of histamine*
32. Mario Navarro Rodriguez (ISTA) – *Does flexoelectricity drive polymer contact electrification?*
33. Johannes Dreckhoff (ISTA) – *From FtsZ treadmilling to membrane constriction: a coarse grained modeling approach*
34. Arun Ravi (TU Wien) – *Simple cilia, complex flows*
35. Maxime Lavaud (Uni Wien) – *Hydrodynamic fluctuations in sedimenting colloids*
36. Hannah Mittermayr (Uni Wien) – *Microscopy based approach for zeta potential measurement*
37. Maximilian Huebl (ISTA) – *A geometric framework for designer self-assembly*
38. Eavan Fitzgerald (ISTA) – *Orchestrating active roller swarms using dynamic magnetic fields.*
39. Guido Giannetti (Uni Wien) – *From crosslink architecture to mechanochemical failure in collagen fibrils*
40. Shoaib Kamil (ISTA) – *Inertialess turbulence in viscoelastic pipe flow*
41. Anežka Májková (TU Wien) – *TCR-pMHC binding kinetics and spatial organization in T-cell activation*
42. Andraz Gnidovec (ISTA) – *Chiral remodeling drives collective rotations in motor-free active nematics*
43. Markus Mezger (Uni Wien) – *Structure and dynamics of soft matter studied by X-ray and light scattering techniques*