Computations and Applications of Geometrical and Topological Properties of Liquid Crystals

Sunday, June 12, 2022 - Tel Aviv University, Melamed Hall, Shenkar Physics Building

9:00-9:30  Coffee

9:30-10:00  Jonathan Selinger (Kent State University) - IAS Distinguished Scholar
Geometry and mechanics of disclinations in nematic liquid crystals

10:00-10:30  Michael Moshe (Hebrew University)
Anomalous screening in solids: From metamaterials to amorphous solids

10:30-11:00  Hillel Aharoni (Weizmann Institute of Science)
Topological defect lines and the quest for smectic monopoles

11:00-11:30  Coffee

11:30-12:00  Charles Rosenblatt (Case Western Reserve University)
Topography and topology in nanopatterned liquid crystals

12:00-12:30  Efi Efrati (Weizmann Institute of Science)
Geometric frustration and compatibility conditions in three dimensional liquid crystals

12:30-13:30  Lunch

13:30-14:00  Robin Selinger (Kent State University) - IAS Distinguished Scholar
Frank-Read sources in nematic liquid crystals: Engineered mechanism for heterogeneous defect nucleation

14:00-14:30  Yair Shokef (Tel Aviv University)
Discrete nematics and topological defects in combinatorial mechanical metamaterials

14:30-15:00  Coffee

15:00-15:30  Yonit Maroudas-Sacks (Technion — Israel Institute of Technology)
Topological defects in the nematic order of actin fibers as organization centers of Hydra regeneration

15:30-16:00  Ivan Smalyukh (University of Colorado Boulder) - IAS Distinguished Scholar
Interactions of solitonic light with topological solitons and defects in liquid crystals

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