

Generation and Control of Forces in Artificial and Living Cells
NORDITA, May 27-June 7, 2024

	Monday, May 27	Tuesday, May 28	Wednesday May 29	Thursday, May 30	Friday, May 31
9:00-10:00	Lightning Talks with coffee break	Moumita Das: Robustness and Resilience of Network-like Biomaterials - Insights from Biopolymer Networks and Circadian Colloids	Vijay Swaminathan: Role of orientational order in focal adhesion-mediated mechanosensing and cellular response	Allison Pattenon: Vimentin promotes collective cell migration through collagen networks via increased matrix remodeling and spheroid fluidity	Gijse Koenderink: How cytoskeletal crosstalk controls cell mechanics: bridging cell-free and cell studies
10:00-11:00		Paul Janmey: The Cell Nucleus as an Active Material	Coffee break	Ajay Gopinathan: Mechanical control of cell-cell interactions during vascular network development	Guy Genin: Recursive cell-matrix feedback in fibroblast activation
11:00-11:30		Coffee Break	Allen Liu: Mechanobiology of membrane: from mechanotransduction to artificial cytoskeleton	Coffee Break	Coffee Break
11:30-12:30	Informal Discussion	Guillaume Romet-Lemonne: Life, death, and resurrection of actin filament branches	Lunch	Fred MacKintosh: Models of extracellular matrices and their composites	Luciana Bruno: Mechanical aspects of mitochondria motion in living cells
12:30-2:00	Lunch	Lunch		Lunch	Lunch
2:00-5:00	Informal Discussion	Informal Discussion	Group Outing	Informal Discussion	Informal Discussion
	Monday, June 3	Tuesday, June 4	Wednesday June 5	Thursday, June 6	Friday, June 7
9:00-10:00	Lightning Talks with coffee break	Alex Mogilner: Chirality propagation from molecules to actin bundles to multicellular groups	John Cooper: Regulation of Actin Capping Protein at Membranes	Anders Carlsson: How to describe membrane-bending forces in cells?	David Sept: New Insights into the Microtubule Lattice
10:00-11:00		Daniel Needleman: Mechanics of Spindles	Coffee break	Christoph Schmidt: Mechanics of bacterial and mammalian cell walls	Victor Kurasov: Phase transition kinetics in a limited volume
11:00-11:30		Coffee Break	Tobias Baumgart: From shape transitions to phase transitions in fast endophilin mediated endocytosis	Coffee Break	Coffee Break
11:30-12:30	Informal Discussion	Dhrubatiya Mitra: the measurement of elastic properties of extracellular vesicles	Lunch	Vikash Pandey: Anomalous diffusion and effective shear modulus in a semi-solid membrane	Julien Berro: New class of force sensors to study the cell's mechanobiology
12:30-2:00	Lunch	Lunch		Lunch	Lunch
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