

2021 NCTS Physics in Complex

Systems Workshop

10/15 Friday

Time	Speaker	Title
12:00 ~ 13:00	Registration	
13:00 ~ 13:10	Opening	
Chair: Hsuan-Yi Chen (NCU)		
13:10 ~ 13:50	Cheng-Hung Chang	A correspondence between polymer entropic forces and chemical potentials of solutions
13:50 ~ 14:30	Hong-Ren Jiang	Polarization of asymmetric surfaces and asymmetric particles under an electric field
14:30 ~ 15:10	Wei-Fan Hu	Chaotic swimming of phoretic particles
15:10 ~ 15:40	Break	
Chair: Chien-Jung Lo (NCU)		
15:40 ~ 16:20	Ashley Nord	Dynamic assembly of the torque-generating units of the bacterial flagellar motor
16:20-17:00	Kumiko Hayashi	Application of the fluctuation theorem to motor proteins: from F1-ATPase to axonal cargo transport by kinesin and dynein

2021 NCTS Physics in Complex Systems Workshop

10/16 Saturday

Time	Speaker	Title
08:30-09:00	Registration	
Chair: Ming-Chya Wu (NCU)		
09:00-09:40	Chun-Yu Liu	Aggregation enhanced collective motions and interface fluctuations of cancer clusters in cancer/endothelial cell mixtures
09:40-10:20	Yeng-Long Chen	Flow-induced fast and slow waltz of red blood cells, with rheological consequences.
10:20-10:40	Break	
Chair: Cheng-Hung Chang (NYCU)		
10:40-11:20	Kiyoshi Kanazawa	Lévy flight in active matter from its microscopic dynamics
11:20-11:35	Min-Yeh Tsai	Modeling protein aggregation kinetics: From nuclearion, fibrill growth, to stochasticity
11:35 -11:50	Yi-Chieh Lai	Effect of individual differences on the jamming transition in traffic flow
11:50-12:05	Chen-En Tsai	Understanding intermittency: our numerical experiment on tightly packed granular particles under steady shearing
12:05-12:20	Duy Pham Minh Nguyen	Long-term robustness of a biological oscillator achieved by compensatory feedback controls
12:20-13:20	Lunch	
Chair: Hong-Yan Shih (AS)		
13:20-14:00	David Wu	Field-Driven Assembly and Floppy Modes of 2D Colloidal Quasicrystals
14:00-14:40	Tetsuya Hiraiwa	Dynamic self-organization of migrating cells through cell-cell contact communication
14:40-15:00	Break	
Chair: Sheng-Hong Chen (AS)		
15:00-15:40	Chen-Hui Chen	An in toto approach to dissecting skin cell behavior in live animals
15:40-16:20	Kyogo Kawaguchi	Graph-based machine learning and statistical physics for tissue homeostasis
16:20-17:00	Shen-Ju Chou	Generating a functional cortex
17:00-17:10	Closing	