MBI-UPenn Joint Symposium

Mechanobiology Institute, National University of Singapore December 9, 2017

Venue: MBI Level 5 Seminar Room

Saturday, December 9, 2017

Time Programme Michael Sheetz, 0930-1000am Mechanobiology Institute, Singapore Non-Muscle Sarcomeres Sense Rigidity and Generate High Forces **Paul Janmey** University of Pennsylvania, USA 1000-1030am Viscous dissipation in tissues and soft substrates affects focal adhesion formation, cell morphology, and motility **Paul Matsudaira** Mechanobiology Institute, Singapore 1030-1100am A Strain Map of Zebrafish Gastrulation Describes the Mechanics of Convergence and Extension and Emergence of Left-Right Symmetry during Epiboly 1100-11-30am Coffee Break Michael Ostap, University of Pennsylvania, USA 1130-1200am Myosin-I motors in membrane transport, deformation, and tubulation using single molecule approaches and engineered cytoskeletal networks Pakorn (Tony) Kanchanawong 1200-1230 Mechanobiology Institute, Singapore Visualizing the Molecular Clutch in Cell Adhesions Guv Genin 1230-0100 pm Washington University in St.Louis, USA Microenvironmental remodeling in plant and animal cell mechanobiology 0100-0200pm Lunch **Rebecca Wells** University of Pennsylvania, USA 0200-0230pm Mechanics of normal and fibrotic tissues Linda Kenney 0230-0300pm Mechanobiology Institute, Singapore Salmonella as an anti-tumor agent Simon Tang Washington University in St Louis, USA 0300-0330pm Effects of Advanced Glycation End-products on the Mechanobiology of the Intervertebral Disc Lim Chwee Teck Mechanobiology Institute, Singapore 0330-0400pm Mechanobiology of Collective Epithelial Cell Migration 0400-0430pm **Coffee Break** Vivek Shenov University of Pennsylvania, USA 0430-0500pm Multiscale model predicts increasing focal adhesion size with decreasing stiffness in fibrous matrices Alexander Bershadsky Mechanobiology Institute, Singapore 0500-0530pm Integrin cell-matrix adhesions mediate and are shaped by the microtubule-myosin II crosstalk G.V.Shivashankar 0530-0600pm Mechanobiology Institute, Singapore & IFOM, Italy Geometric control of genome programs