# Universal Biology Institute-MBI Joint Symposium

**Mechanobiochemistry Institute, National University of Singapore**

**April 14-15, 2018**

Venue: MBI Level 5 Seminar Room

**Saturday, April 14, 2018**

<table>
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<th>Time</th>
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| 0930-1000am   | Masaki Sano  
**Dep of Physics, Graduate School of Science, The University of Tokyo, Japan**  
*A physical mechanism controlling collective dynamics of neural stem cells: Topological defects in nematic ordered state* |
| 1000-1030am   | Yusuke Toyama  
**Mechanobiology Institute & Department of Biological Sciences - NUS, Singapore**  
*Mechanobiology of apoptosis in a tissue* |
| 1030-1100am   | Coffee Break |
| 1100-1130am   | Tetsuya Hiraiwa  
**Dep of Physics, Graduate School of Science, The University of Tokyo, Japan**  
*Collective cell movement driven by left-right asymmetric shrinkage of cell-cell junctions* |
| 1130am-1200noon | Timothy Saunders  
**Mechanobiology Institute & Department of Biological Sciences - NUS, Singapore**  
*Selective filopodia adhesion ensures robust cell matching in the Drosophila heart* |
| 1200-1230pm   | Tetsuhiro Hatakeyama  
**Graduate School of Arts and Sciences, The University of Tokyo, Japan**  
*Reciprocity between robustness and plasticity as a universal law in biology* |
| 1230-0200pm   | Lunch |
| 0200-0230pm   | Shuji Ishihara  
**Graduate School of Arts and Sciences, The University of Tokyo, Japan**  
*From cell to tissue: a continuum model for epithelial tissue deformation* |
| 0230-0300pm   | Paul Matsudaira  
**Mechanobiology Institute, Centre for Bioimaging Sciences & Dept of Biological Sciences-NUS, Singapore**  
*The Emergency of Symmetry from Strain Maps of Zebrafish Gastrulation* |
| 0300-0330pm   | Ronen-Zaidel Bar  
**Mechanobiology Institute, Singapore**  
*Syncytial germline architecture is actively maintained by contraction of an internal actomyosin corset* |
| 0330-0400pm   | Coffee break |
| 0400-0430pm   | Akihiko Nakajima  
**Dep of Basic Science, Graduate School of Arts and Sciences, The University of Tokyo, Japan**  
*Cell-to-cell heterogeneity in spatial and temporal sensing of signals in migrating cells* |
| 0430-0500pm   | Fumio Motegi  
**Mechanobiology Institute, Singapore**  
*Deconstruction and reconstruction of cell polarity networks* |

**6.00 PM – Dinner at MBI Level 10 Lobby**
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**Sunday , April 15 , 2018**

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| 0930-1000am  | Yasushi Okada  
Dep of Physics, Graduate School of Science, The University of Tokyo, Japan  
*Imaging based approaches to the mechanobiology of the fast axonal transport* |
| 1000-1030am  | Alexander Bershadsky  
Mechanobiology Institute, Singapore  
*Control of integrin-mediated adhesions by microtubules and actomyosin cytoskeleton* |
| 1030-1100am  | Coffee Break |
| 1100-1130am  | Taihei Fujimori  
Dep of Basic Science, Graduate School of Arts and Sciences, The University of Tokyo, Japan  
*Differential polarity - an efficient and rapid mechanism of cell sorting* |
| 1130am-1200noon | Virgile Viasnoff  
Mechanobiology Institute, Singapore & CNRS, France  
*From Microdishes to microniches. 3D micro-environmental control around single cells. Application to single cell apico basal polarization and lumenogenesis control* |
| 1200-1230pm  | Marius Sudol  
Mechanobiology Institute, NUS, Department of Physiology, Institute of Molecular and Cell Biology (IMCB) A*STAR, Singapore  
*The role of YAP Mechano-Responder in Actin Dynamics and Metastasis is revealed by CRISPR/Cas9 Gene Editing Approach* |
| 1230-0200pm  | Lunch |
| 0200-0230pm  | Hideo Higuchi  
Dep of Physics, Graduate School of Science, the University of Tokyo, Japan  
*Unified walking model for processive motor proteins and its experimental evidences* |
| 0230-0300pm  | Yan Jie  
Mechanobiology Institute, Department of Physics, NUS, Singapore  
*Mechanical lifetime of biomolecules* |
| 0300-0330pm  | Nen Saito  
Dep of Physics, Graduate School of Science, The University of Tokyo, Japan  
*Phase field simulation for macropinocytosis of amoeboid cells* |
| 0330-0400pm  | G.V.Shivashankar  
Mechanobiology Institute & Department of Biological Sciences, NUS, Singapore & IFOM, Italy  
*Mechanical control of nuclear reprogramming & cell-fate decisions* |
| 0400-0430pm  | Closing & High Tea |