Sunday (September 7):

16:00 Check-in begins (Front Desk – Professional Development Centre - 24 hours)

17:30-19:30 Dinner

20:00 Informal gathering in 2nd floor lounge, Corbett Hall. Beverages and snacks are available on a cash honor system.

Monday (September 8):

7:00-8:30 Breakfast

8:30-8:45 Welcome and Introduction

8:45-9:25 Sept, David ‘Structure-Function Differences of Parasite Actin’

9:25-10:05 Pollard, Thomas D. ‘Models for the dynamics of the cytokinesis machinery across the entire cell cycle in fission yeast’

10:05-10:30 Coffee break

10:30-11:10 Bershadsky, Alexander ‘Organization of the actin cytoskeleton’

11:10-11:50 Carlsson, Anders ‘How Actin Pulls on the Cell Membrane to Drive Endocytosis’

11:50-12:30 Fletcher, Dan ‘Cytoskeletal assembly under confinement’

12:30-13:30 Lunch

Free Afternoon

17:30-19:30 Dinner

19:30-20:20 Keren, Kinneret ‘Actin turnover in lamellipodial keratocyte fragments’

20:10-20:50 Papoian, Garegin ‘Detailed Computational Modeling of the Eukaryotic Cytoskeleton’

20:50-21:30 Losert, Wolfgang ‘Wave-Based Mechanisms for Contact Guidance and Collective Migration’

Tuesday (September 9):

7:00-8:30 Breakfast

8:30-9:10 Ermentrout, Bard ‘Formation and destabilization of aster-like structures in actin-myosin models’

9:10-9:50 Cytrynbaum, Eric ‘Bending of FtsZ’
9:50-10:30 Jilkine, Alexandra ‘An interlocked feed-forward loop circuit can explain the phenotypic heterogeneity of fat-cell differentiation’

10:30-10:55 Coffee break

10:55-11:35 Marée, Stan ‘Cell polarity in plants and animals: an evolutionary conservation of developmental principles’

11:35-12:15 Levchenko, Andre ‘Computing to move: how live cells integrate complex inputs in polarization and migration’

12:15-13:30 Lunch

13:00-14:00 Guided Tour of The Banff Centre; meet in the 2nd floor lounge, Corbett Hall
14:00 Group Photo – meet on the front steps of Corbett Hall
14:15-16:30 Poster Session (Max Bell Complex)

17:30-19:30 Dinner

19:30-20:20 Dawes, Adriana ‘Symmetry breaking and actomyosin regulation in the early C. elegans embryo’

20:10-20:50 Grieneisen, Verônica ‘Interlocking cell polarities: from cells to tissues’

20:50-21:30 Holmes, Bill ‘Modeling the regulation of dynamic motility: actin waves, polarity oscillations’

Wednesday (September 10):

7:00-8:30 Breakfast

8:30-9:10 Gardner, Melissa ‘Minus-End Directed Kinesin-14 Motors Align Anti-Parallel Microtubules to Control Metaphase Spindle Length’

9:10-9:50 Goodson, Holly ‘Re-evaluation of the Concept of Critical Concentration as it Relates to Microtubules and other Steady-State Polymers’

9:50-10:15 Coffee break

10:15-10:55 Weiner, Orion ‘Shining new light on signal integration with optogenetics’

10:55-11:35 Bement, William ‘Cyclin-dependent kinase-constrained cortical chaos’

11:35-12:15 Diz Munoz, Alba ‘How neutrophils might convert changes in membrane tension to changes in intracellular signaling during chemotaxis’

12:15-13:30 Lunch

Free Afternoon
17:30-19:30 Dinner

19:30-20:20  Walcott, Sam ‘Ensemble behavior of myosin motors’

20:10-20:50  Fogelson, Ben ‘Scaling behavior of actomyosin stress fibers’

20:50-21:30  Sykes, Cécile ‘Shape changes of cell-sized liposomes reveal actomyosin forces’

Thursday (September 11):

7:00-8:30 Breakfast

8:30-9:10  Mori, Yoichiro ‘Simulating chemical diffusion and osmotic water flow in a moving domain’

9:10-9:50  Sun, Sean ‘The role of water in cell mechanics, cell shape and cell motility’

9:50-10:15  Coffee break

10:15-10:55  Odde, David ‘Motor-clutch model for substrate stiffness sensing by living cells’

10:55-11:35  Paluch, Ewa ‘Actin cortex mechanics in animal cell morphogenesis’

11:35-12:15  Janmey, Paul ‘Non-linear elasticity and relaxation in soft tissues and polymer networks’

12:15-13:30 Lunch

Free Afternoon

17:30-19:30 Dinner

19:30-20:10  Upadhyaya, Arpita ‘Actin dynamics during signaling activation in immune cells’

20:10-20:50  Verkhovsky, Alexander ‘Shape-motion feedback in rapidly migrating cells’

20:50-21:30  Allard, Jun ‘Actin-myosin spatial patterns’

Friday (September 12):

7:00-8:30 Breakfast

8:30-9:10  Nathke, Inke ‘The mechanics of Crypt fission’

9:10-9:50  Svitkina, Tatyana ‘Shaping dendritic spines in hippocampal neurons by spectrin cytoskeleton’

9:50-10:00  Short break

10:00-10:40  Khismatullin, Damir ‘Three-dimensional modeling of amoeboid chemotaxis’
10:40-11:10 Mogilner, Alex ‘Modeling contraction of disordered actomyosin arrays’

11:30-13:30 Lunch – Checkout by 12 noon