

Sunday, October 5

18:00 - 19:30 Registration

19:00 - Welcome banquet

Monday, October 6

09:00 - 09:10 Opening by Jan-Michael Rost, Managing Director of the MPIPES and the Organizers

09:10 - 09:30 Ewa Paluch (Max Planck Institute of Molecular Cell Biology and Genetics)
Introduction

09:30 - 10:10 Lakshminarayanan Mahadevan (Harvard University)
Aspects of cellular hydraulics

10:10 - 10:30 Amy Maddox (University of Montréal)
Anillin is essential for proper membrane curvature during polar body extrusion

10:30 - 11:00 Coffee break

11:00 - 11:20 Alexis Gautreau (CNRS Gif-sur-Yvette)
Membrane blebbing and assembly of the wave complex

11:20 - 12:00 Jean-François Joanny (Institut Curie)
Instabilities of cortical actin layers: Oscillations and blebbing

12:00 - 12:20 Jonathon Howard (Max Planck Institute of Molecular Cell Biology and Genetics)
The shapes of red blood cells - Influences of membrane bilayer asymmetry and the membrane skeleton

12:20 - 12:40 Jakub Sedzinski (Max Planck Institute of Molecular Cell Biology and Genetics)
Blebs and cleavage furrow stability during cytokinesis

12:40 - 14:30 Lunch

14:30 - 15:10 Stephan Grill (Max Planck Institute for the Physics of Complex Systems)
*Cortical flows in the *C. elegans* zygote*

15:10 - 15:30 Patricia Kunda (University College London)
Regulation of the mitotic cell cortex during cell division and cancer progression

15:30 - 15:50 Sebastien Carreno (University of Montréal)
PiP(4,5)P₂ regulates mitotic cortical dynamics through control of moesin activation

15:50 - 16:30 Coffee break

16:30 - 17:30 **CELLMO08-Colloquium (public for all members of MPIPES)**

Fred MacKintosh (Vrije Universiteit)
Non-equilibrium mechanics and fluctuations in the cytoskeleton

17:40 - 19:00 Dinner

19:00 - Poster session with beverages and snacks

Tuesday, October 7

- 09:00 - 09:40 Michael Sheetz (Columbia University)
Lipid-cytoskeleton adhesion in preventing bleb formation
- 09:40 - 10:20 Robert Kay (MRC Laboratory of Molecular Biology)
Blebbing and chemotaxis in Dictyostelium
- 10:20 - 10:40 Oliver Fackler (Universitätsklinikum Heidelberg)
SH4-domain induced plasma membrane blebbing
- 10:40 - 11:00 Group photo (to be published on the workshop's web page) & Coffee break
- 11:00 - 11:20 Rhoda Hawkins (Université Pierre et Marie Curie)
Cell migration in confined environments: From micro-channels to physical modelling
- 11:20 - 12:00 Thierry Soldati (University of Geneva)
Mechanisms of blebbing motility: What do we learn from the amoeba?
- 12:00 - 12:40 Erik Sahai (Cancer Research UK, London)
Amoeboid cancer cell motility
- 12:40 - 14:00 Lunch
- 14:00 - 14:40 Anne Ridley (King's College London)
Regulation of leukocyte migration by Rho GTPases
- 14:40 - 15:20 Michael Olson (Beatson Institute for Cancer Research)
The ROCK 1 kinase in apoptotic morphological responses
- 15:20 - 15:50 Coffee break
- 15:50 - 16:10 Anoop Cherian (Max Planck Institute for Biochemistry)
Actin "worms", a novel three dimensional actin network
- 16:10 - 16:50 Tobias Baumgart (University of Pennsylvania)
Sorting of proteins and lipids in membrane curvature and composition gradients
- 17:15 Leaving for the guided city tours and the conference dinner in the "Marcolini"

Wednesday, October 8

- 09:00 - 09:40 Guillaume Charras (University College London)
Life and times of a cellular bleb
- 09:40 - 10:20 Guillaume Salbreux (Institut Curie)
Hydrodynamics of cellular cortical flow and formation of contractile rings
- 10:20 - 10:40 Stefanie Redemann (Max Planck Institute for Molecular Cell Biology and Genetics)
*The role of the cortex for spindle positioning in *C. elegans**
- 10:40 - 11:00 Coffee break
- 11:00 - 11:40 Nathan Goehring (Max Planck Institute for Molecular Cell Biology and Genetics)
*Blebs, the cortex and PAR polarity in *C. elegans* embryos*
- 11:40 - 12:20 Carl-Philipp Heisenberg (Max Planck Institute for Molecular Cell Biology and Genetics)
Cell blebbing in development
- 12:20 - 12:30 Closing session
- 12:30 - 14:00 Lunch