

Day 1: Tuesday, Aug 16

LATERAL STRUCTURE IN MEMBRANES AND BILAYERS

Session Chair: TBD

12:40 – 12:45: Opening

12:45 - 13:30: Invited 1: Jerry Feigenson “Lipid bilayer structure: What do we know, and what would we like to know?”

13:30 – 14:15: Invited 2: Luca Monticelli “Hydrophobic pollutants in phase-separated lipid membranes”

14:15 – 15:00: Invited 3: Erwin London “Using lipid exchange to explore the principles and functions of lipid domain formation”

15:00 - – 15:30: Coffee break

Session Chair: TBD

15:30 – 15:45: Contributed 1: Aldo Jesorka “Lab on membrane- rapid prototyping of molecular lipid films”

15:45 – 16:00: Contributed 2: Samuli Ollila “Direct comparison of lipid bilayer structures between simulations and experiments”

16:00 – 16:15: Contributed 3: Anna Duncan “Molecular dynamics simulations of complex and crowded membranes: from the nanoscale to the mesoscale”

16:15 – 17:00: Invited 4: Ben Machta “Do anesthetics interfere with regulation by a critical membrane?”

17:00 – 17:45: Invited 5: Georg Pabst “Sub-nanometer structural properties of lipid domains and asymmetric membranes”

17:45 – 19:00: Poster Session 1

Day 2: Wednesday, August 17

Session Chair: TBD

09:00 – 09:45 Invited 6: Frederike Schmid “Monolayer curvature induced nanoscale structures in lipid membranes”

09:45 – 10:30 Invited 7: Himanshu Khandelia “Measurements of Flexoelectricity and Cholesterol Re-distribution in the Bilayer”

10:30 – 11:15 Invited 8: Tomasz Rog “Interdigitation of Long-Chain Sphingomyelin and Ganglioside GM1 Induces Coupling of Membrane Leaflets”

11:15 – 11:30 Coffee break

Session Chair: TBD

11:30 – 12:15: Invited 9: Mary Kraft “Cholesterol and Sphingolipid Distributions in the Plasma Membrane: Implications for Control of Plasma Membrane Organization”

12:15 – 1:00: Invited 10: Ilya Levental “The Biophysics of Living Membranes”

13:00 – 14:00: Lunch

LIPID PROTEIN INTERACTIONS

Session Chair: TBD

14:00 – 14:45: Invited 11: Martin Ulmschneider “How membrane active peptides partition into bilayers and spontaneously assemble into functional membrane proteins”

14:45 – 15:00: Contributed 4: Tristan Berau “Folding and stability of transmembrane helices from coarse-grained and atomistic simulations”

15:00 – 15:30 Coffee Break

Session Chair: TBD

15:30 – 15:45: Contributed 5: Nathalie Reuter “How do soluble proteins bind to membranes? Answers from in silico investigations”

15:45 – 16:00: Contributed 6: Celine Galvignion “Molecular factors responsible for the modulation of alpha-synuclein lipid-induced aggregation”

16:00 – 16:45: Invited 12: Siewart-Jan Marrink “Lipid-protein interactions in complex membranes”

17:00 – 19:00: Poster Session 2

Day 3: Thursday, August 18

COMPLEX DYNAMICS AND COMPOSITION

Session Chair: TBD

09:00 – 09:45 Invited 13: Ralf Metzler “Anomalous diffusion in membranes”

09:45 – 10:30 Invited 14: Matthias Weiss “From protein clusters to functional membrane domains”

10:30 – 11:00 Coffee break

Session Chair: TBD

11:00 – 11:45: Invited 15: Frank Brown “Influence of periodic boundary conditions on lateral diffusion in membranes”

11:45 – 12:00: Contributed 7: An Ghysels “Position dependent diffusion tensors in anisotropic media from simulation: oxygen transport in and through membranes”

12:00 – 12:15: Contributed 8: Svetlana Baoukina “Composition fluctuations in lipid bilayers”

12:15 – 12:30: Contributed 9: Syma Khalid “Molecular simulations that put the chemical complexity into model bacterial membranes”

12:30 – 13:30: Lunch

Session Chair: TBD

13:30 – 14:15: Invited 16: Mikko Haataja “Compositional lipid domain growth, coarsening, and alignment dynamics in planar bilayer membrane systems”

14:15 – 15:00: Invited 17: Gerrit Groenhof “Proton Power”

15:00 – 15:45: Invited 18: Chia-Lung Hsieh “High-speed imaging reveals single-molecule nanoscopic diffusion in heterogeneous membrane”

15:45 – 16:15: Coffee break

Session Chair: TBD

16:15 – 17:15: Invited 19 — **KEYNOTE:** Christian Eggeling “Biophysics of membranes - New insights from super-resolution STED microscopy”

CONFERENCE DINNER

17:45 – 19:45 Buffet dinner for conference attendees

Day 4: Friday, August 19

CURVATURE

Session Chair: TBD

09:00 – 09:45: Invited: 20: Rich Pastor “Lipid effects on curvature induction by peptides”

09:45 – 10:30: Invited: 21: Carsten Mim “Structural Biology at the Membrane Interface: Electron Microscopy to the Rescue”

10:30 – 11:00: Coffee break

Session Chair: TBD

11:00 – 11:45: Invited 22: Cameron Abrams “The Roles of Intrinsic Curvature and Lipid Sorting on the Stability of Hemifusions via Coarse-Grained Molecular Simulations”

11:45 – 12:30: Invited 23: Markus Deserno “What can we learn about membranes by stressing them out?”

12:30 - 12:40: Closing