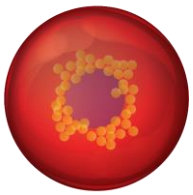
INTERNATIONAL CONFERENCE ON ENGINEERING SYNTHETIC CELLS AND ORGANELLES SYNCELL2020



Day 1: Monday, May 11, 2020

Tutorials		
Time	**Title**	**Instructor**
8:30am –	Registration Open (all day)	
9:15am – 9:30am	Welcome	Gabriel Lopez et al.
9:30am – 10:15am	Understanding and controlling the morphological complexity of biomembranes	Reinhard Lipowsky
10:15am – 11:00am	Unspecific interactions in or of cell-like compartments: theory & experiments	Karin Jacobs
11:00am – 11:15am	Break	
11:15am – Noon	Liquid/liquid phase separation of intrinsically disordered proteins	Nick Carroll
Noon – 1:00pm	Lunch	
1:00pm – 1:45pm	Development and application of DNA in nanoscale robotics	Darko Stefanovic
1:45pm – 2:30pm	Can a material perform as an engine?	Martin Möller
2:30pm – 2:45pm	Break	
2:45pm – 3:30pm	Methods to visualize 3D dynamics	Jim Werner
3:30pm – 4:15pm	Synthetic building blocks to grow functional tissues	Laura De Laporte
5:00pm – 6:30pm	Welcoming Reception (light hors d'oeuvres & drinks)	
6:30pm -	Dinner on your own	

Day 2: Tuesday, May 12, 2020

8:00am –	Registration Open (all day)	
Session 1: Functional Compartments		
Time	**Title**	**Speaker**
8:30am–9:00am	Welcome	Gabriel Lopez et al.
9:00am–9:40am	Mechanism in collective organizations of living and synthetic cells	Joachim Spatz
9:40am-10:00am	Rational design for assembly of biologically inspired compartments	Jacqueline De Lora
10:00am–10:20am	Break	
10:20am–11:00am	Membraneless and stimuli-responsive organelles	Felipe Garcia Quiroz
11:00am–11:20am	Engineered synthetic membraneless organelles built from self-assembling disordered proteins to regulate cellular function	Matthew Good
11:20am – Noon	Lipid sponge droplets as programmable synthetic organelles	Neal Devaraj
Noon – 1:00pm	Lunch	
Session 2: Networks & Synthesis		
1:00pm – 1:40pm	Information processing in synthetic cells	Matthew Lakin
1:40pm – 2:00pm	Sustainable phospholipid biosynthesis for a synthetic cell	Eleonora Bailoni
2:00pm – 2:40pm	Synthetic cell systems for scalable bio-production of plant natural products	James Carothers
2:40pm – 3:00pm	Break	

3:00pm – 3:40pm	Fixing CO_2 fixation: Building an artificial chloroplast drop by drop	Tobias Erb
3:40pm – 4:00pm	Cell-free autonomous biogenesis of a ribosomal subunit	Shirley Daube
4:00pm – 4:20pm	Light-driven ATP production promotes mRNA biosynthesis inside hybrid multi-compartment artificial protocells	Emiliano Altamura
4:20pm – 5:00pm	Cell-free systems for synthetic cells, on-demand biomanufacturing, molecular sensing, and education	Michael Jewett
5:30pm – 7:00pm	Industrial Forum / Poster Session #1	
7:00pm	Dinner on your own	

Day 3: Wednesday, May 13, 2020

Session 3: Morphology, Motility & Machines		
Time	**Title**	**Speaker**
8:30am – 8:40am	Welcome & Logistics	Gabriel Lopez et al.
8:40am – 9:20am	Designing biomolecular devices and machines	Hendrik Dietz
9:20am – 9:40am	Programmable DNA origami motors	Alisina Bazrafshan
9:40am – 10:00am	Breaking the symmetry in synthetic cells by engineering minimal contractile actomyosin networks with DNA-nanotechnology	Kevin Jahnke
10:00am – 10:20am	Break	
10:20am – 11:00am	Synthonems: Building Synthetic Cilia from the Bottom Up	Eberhard Bodenschatz
11:00am – 11:20am	Cytoskeleton induced morphological change of artificial cells toward cellular motility	Sungwoo Jeong
11:20am –12:00pm	A synthetic morphogenic perceptory system	Philippe Bastiaens
12:00 – 12:20pm	Microfluidic approaches towards reconstitution of synthetic cells motility	Ilia Platzman
12:30 – 1:30pm LUNCH	**Career Development Workshop**: How to present your best self – confidence is key!	Eva Chi Bruna Jacobson
Session 4: Self-Organization		
1:30pm – 2:10pm	Membranes matter: designing bilayer membranes to control functions of artificial cells	Neha Kamat
2:10pm – 2:30pm	Controlled linkage of different proteins in synthetic cells	Amelie Benk
2:30pm-2:50pm	Controlled division of cell-sized vesicles by low densities of membrane-bound proteins	Jan Steinkuhler
2:50pm – 3:30pm	A shortcut towards synthetic cell division	Kerstin Goepfrich
3:30pm – 3:50pm	Break	
3:50pm – 4:10pm	Superselectivity in synthetic protocells	Cesar Rodriguez-Emmenegger
4:10pm – 4:30pm	Bottom-up assembly of functional fully-synthetic extracellular vesicles	Oskar Staufer
4:30pm – 5:10pm	How living matter self-organizes while breaking action-reaction symmetry	Ramin Golestanian
5:10pm – 5:30pm	Artificial mitochondrion, bottom-up!	Lado Otrin
6:00pm – 7:30pm	Poster Session #2	
7:30pm	Dinner on your own	

Day 4: Thursday, May 14, 2020

Session 5: Looking Toward the Future		
Time	**Title**	**Speaker**
8:30am – 8:40am	Welcome & Logistics	Gabriel Lopez et al.
8:40am – 9:20am	Lineage agnostic biology	Kate Adamala
9:20am – 9:40am	“Cellular Stokesian dynamics”: a computational model for biological cells	Roseanna Zia
9:40am – 10:20am	Cell free operating systems for diagnostics	Andrew Ellington
10:20am – 10:40am	Break	
10:40am – 11:20pm	Essential universal tasks for a minimal living cell	Clyde Hutchison
11:20am – 11:40pm	Golgi-on-a-chip for cell-free protein synthesis and glycosylation	Zachary Manzer
11:45am – 12:45pm	Valedictory Discussion	Andrew Shreve et al.
12:45pm	Lunch	