

Emergence in Chemical Systems 3.0 Conference Schedule

Time	Speaker	Title	Affiliation
Monday 6/17	Perspectives		
	Session Leader:	Steen Rasmussen	
9:00-9:10	Conference Opening		
9:10-9:35	Opening Lecture: Helena Wisniewski	Emergence and Innovation	University of Alaska, Anchorage
9:35-10:10	Mark Bedau	The drivers of creativity and innovation in the emergence and evolution of technology	Reed College
10:10-10:50	Coffee		
10:50-11:25	George Kampis	The Origin of Success: From Relational Properties to Innovation Acceleration	Eotvos University
11:25-12:00	Rene Doursat	Morphogenetic Engineering: Programming the Emergence of Complex Systems Architecture	School of Biomedical Engineering, Drexel University
12:00-1:00	Lunch		
	Session Leader:	Kunihiko Kaneko	
1:00-1:35	Luca Cardelli	On Biochemical Algorithms	Microsoft Research
1:35-2:10	Qi Ouyang	Biological Engineering in Synthetic Biology	Peking University
2:10-2:45	Jerzy Maselko	Growing Chemical Organisms	University of Alaska Anchorage
2:45-3:15	Coffee		
3:15-3:50	Wolfgang Banzhaf	Emergence and Genetic Programming	Memorial University of Newfoundland
3:50-4:25	Ross Rinaldi	Nanotechnology-based Tools for Diagnosis and Therapy: Results and Perspectives	Institute of Nanoscience, Lecce, Italy
4:25-5:00	Tanja Pietras	Research Opportunities on Systems Chemistry, Chemical Networks and the Origin of Life	Division Director, NSF, Division of Chemistry
6:00-10:00	Poster Session		
Tuesday 6/18	Emergence in Inorganic Chemistry		
	Session Leader:	Michael Russell	
9:00-9:35	Julyan Cartwright	From Chemical Gardens to Chemobionics	University of Granada
9:35-10:10	Oliver Steinbock	Chemobionics: Pattern Formation by Precipitation Processes	Florida State University
10:10-10:50	Coffee		
10:50-11:25	James T. Pantaleone	The Dynamics and Interactions of Tubes in Chemical Gardens	University of Alaska Anchorage
11:25-12:00	Geoff Cooper	Directed Assembly of Inorganic Micron-scale Tubular Architectures Using Real-time Optical Control	University of Glasgow
12:00-1:00	Lunch	Networks	
	Session Leader:	Sandra Pizzarello	
1:00-1:35	Kunihiko Kaneko	Plasticity, Memory, and Homeostasis in Biological Systems: Universal Dynamics in	University of Tokyo

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		Catalytic Reaction Networks	
1:35-2:10	Sijbren Otto	Emergence of Self-replicators From Dynamic Combinatorial Libraries	University of Groningen
2:10-2:45	Douglas Philp	Networks of Interacting Replicators as Building Blocks for Functional Chemical Systems	University of St. Andrews North Haugh
2:45-3:15	Coffee		
3:15-3:50	Areejit Samal	Phenotypic constraints drive the architecture of biological networks	International Centre for Theoretical Physics
3:50-4:25	Harold Fellermann	Emergence and selection of cooperative structures in a self-replicating binary polymer model	University of Southern Denmark
5:30	Bus leaves Gorsuch Commons for Banquet at the Alaska Aviation Museum		
6:00-9:00	Banquet		
Wednesday 6/19	Emergence in Genomics		
	Session Leader: Andrew Pohorille		
9:00-9:35	Jose Jimenez	RNA Fitness Landscapes	Massachusetts Institute of Technology
9:35-10:10	Ram Krishnamurthy	Towards an Understanding of the Emergence of RNA	Scripps Research Institute
10:10-10:50	Coffee		
10:50-11:25	Piet Herdewyn	Orthogonal Chemistry Towards a Synthetic Genome	University of Leuven
11:25-12:00	Michael H. Hecht	Sustaining Life With Genes and Proteins Designed De Novo	Princeton University
12:00-1:00	Lunch Short Talks		
	Session Leader: Dezso Horvath		
1:00-1:15	Jurek Gorecki	Information Processing with Belousov-Zhabotinsky Droplets	Polish Academy of Science, Institute of Physical Chemistry
1:15-1:30	John Pojman	Time-lapse and Cur-on Demand Polymerization Using Autocatalytic Systems	Louisiana State University
1:30-1:45	Laurie Barge	Self Assembling Inorganic Precipitates in Alkaline Hydrothermal Systems	Jet Propulsion Laboratory
1:45-2:00	Erwan Bigan	Random Complex Conservative Chemical Reaction Networks for Biological Toy Models	Universite Paris Diderot (Paris, France)
2:00-2:15	Elizabeth Griffith	The Role of UV Light in Building Complexity in the Origin of Life	University of Colorado
2:15-2:30	Peter Strazewski	Dynamic Off-Equilibrium Chemical Systems Composed of Oligonucleotides, Oligopeptides, Phospholipids, and Glycolipids	Universite Claude Bernard Lyon (Villeurbanne, France)
2:30-3:00	Coffee		
3:00-3:15	Thomas M. Hermans	Organic pH-oscillators Frozen in Time	Universite de Strasbourg (Strasbourg, France)
3:15-3:30	Thomas Buhse	Mirror-image Symmetry Breaking and Kinetic Proofreading in Models with Different Oligomeric Orders of the First Experimental Example of Absolute Asymmetric Synthesis	Universidad Autonoma del Estado de Morelos (Cuernavaca, Mexico)
3:30-3:45	Elio Mattia	How to Achieve Exponential Replication?	University of Groningen

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			(Groningen, Netherlands)
3:45-4:00	Brij B. Tewari	Interaction of Aspartic Acid and Histidine with Metal Hexacyanoferrate(II) Complexes	University of Guyana (Georgetown, Guyana)
4:00-4:15	Istvan Kiss	Emerging Regular Network Dynamics of Electrochemical Micro-Oscillators	Saint Louis University
4:15-4:30	Victor V. Yashin	Modeling Peristaltic Waves in Self-Oscillating Gel	University of Pittsburgh
6:00-9:00	Poster Session		
Thursday 6/20	Transition From Non-living to Living Matter		
	Session Leader:	Addy Pross	
9:00-4:35	Sandra Pizzarello	Abiotic complexity of extraterrestrial organic materials and their evolution on early Earth	Arizona State University
9:35-10:10	Anton Petrov	Molecular Paleontology of the Ribosome	Georgia Institute of Technology
10:10-10:50	Coffee		
10:50-11:25	Michael Russell	The Prebiotic Molecules, Ions, Nanocrysts and Clusters, Focused at a Submarine Alkaline Hydrothermal Mound That Contributed to Life's Emergence: $-H^+$, H_2 , CH_4 , NH_3 , CO_2 , NO , $H_2PO_4^-$, $[Fe \gg Ni > Co > Mo]S$ and $Fe_2(OH)_5$	California Institute of Technology
11:25-12:45	Lunch		
	Session Leader:	Michael Hecht	
12:45-1:20	Addy Pross	Identifying the Driving Force for Chemical and Biological Evolution	Ben-Gurion University of the Negev, Israel
1:20-1:55	Andrew Pohorille	The Origin of Protein Functions	NASA Ames Research Center
1:55-2:30	Steen Rasmussen	Transition from nonliving to living matter: Challenges in connecting information, metabolism and container	University of Southern Denmark
2:30-3:00	Coffee		
3:00-3:35	Pierre-Alain Monnard	Replication of Information in Chemical Systems	Chemistry and Pharmacy University of Southern Denmark
3:35-4:10	William Brazelton	Serpentinization, Archaeal Biofilms, and Origin of Multicellular Communities	School of Oceanography, University of Washington
4:10-4:45	Matthew Powner	On The Divergent Abiotic Multicomponent Assembly of Nucleotides in Water	University College London
Friday 6/21	Glacier and Whale Watching; bus leaves Gorsuch Commons at 10 AM and returns approx. 5:30 PM		
Saturday 6/22	Glacier Hike; bus leaves Gorsuch Commons at 11:30 AM and returns approx.. 6:15 PM		