

Thursday, 19 July 2012

8:00	Registration opens: Kellogg Center, Central Lobby					
9:30	Family Meet-Up: Informal meeting for attendee families (esp. with children) about fun things to do around town (Room 107)					
Time	Red Room 103AB	Orange Room Kellogg Auditorium	Yellow Room 104AB	Green Room Lincoln Room	Blue Room 101	Purple Room 106
9:30	Tutorial: Whole Genome Resequencing (Barrick)	Tutorial: Historical Contingency and the Long-Term Evolution Experiment (Blount)	Tutorial: Teaching Evolution and the Nature of Science with Avida-ED digital evolution education software (Pennock)	Tutorial: Evolutionary Robotics (Bongard)	Workshop: Artificial Life in Industry (Barbalet)	Workshop: EvoNet 2012: Evolving Networks, from Systems/Synthetic Biology to Computational Neuroscience (Wrobel, Schilstra, Kowaliw, Steuber)
11:30	Lunch on your own (Brody Square, etc.)					
1:00	Tutorial: SEEDS Platform for Evolutionary and Ecological Simulations (Connelly)	Tutorial: Neuroevolution (Miikkulainen)	Tutorial: Avida (Grabowski & Bryson)	Tutorial: Evolutionary Game Theory (Adami)	Workshop: Teaching Artificial Life for Industry (Barbalet)	Workshop: Evolution of Physical Systems (Rieffel, Mouret, Lipson)
3:00	Snack Break: South Lobby					
3:30	Tutorial: Quorum Sensing (Waters & Connelly)	Tutorial: Intro to Genetic Algorithms (Goodman)	Avida Development Summit (Bryson)	Tutorial: Evolutionary Art (Brown)	Birds of a Feather Session: Artificial Life Hobbyists (Barbalet)	Workshop: Hard to Define Events (Alicea & Grabowski)
5:30	Dinner on your own (Brody Square, etc.)					
6:45, 7:00	Buses from Kellogg Center to Wharton Center					
7:30	Public Welcome and Keynote address: Jack Szostak (Wharton Center)					
9:00, 9:15	Buses back from Wharton Center to Kellogg Center					

Friday 20 July 2012		
8:00	Registration opens: Kellogg Center, Central Lobby	
9:00	Conference Welcome and Keynote address: Radhika Nagpal (Kellogg Auditorium)	
10:20	Snack Break: South Lobby	
Time	Kellogg Auditorium	Lincoln Room
	EiA I: Frequency Dependence and Co-Evolution Chair: Claus Wilke	B&I I: Evolution of Robot Control Chair: Josh Bongard
10:50	Coevolving parasites improve host evolutionary search on structured landscapes - Williams	Rewarding Reactivity to Evolve Robust Controllers without Multiple Trials or Noise - Lehman, Risi, D'Ambrosio, & Stanley
11:15	Key innovation in a virus catalyzes a coevolutionary arms race - Meyer, Flores, Weitz, & Lenski	Second Order Learning and the Evolution of Mental Representation - Arnold, Suzuki, & Arita
11:40	Quantifying Frequency-Dependent Fitness Effects in Evolving Microbial Populations - Ribbeck & Lenski	Evolution of Virtual Creature Foraging in a Physical Environment - Pilat, Ito, Suzuki, & Arita
12:05	Evolutionary potential is maximized at intermediate diversity levels - Walker & Ofria	Brainless Bodies: Controlling the Development and Behavior of Multicellular Animats by Gene Regulation and Diffusive Signals - Joachimczak, Kowaliw, Doursat, & Wrobel
12:30	Lunch on your own (Brody Square, etc.)	
	CD I: Distribution of Labor and Roles Chair: Heather Goldsby	SB I: Sub-Cellular Synthetic Biology Chair: Jeff Barrick
2:00	Limitations of response thresholds models of division of labor - Lichocki, Tarapore, Keller, & Floreano	Programming DNA-based reaction-diffusion circuits for pattern transformation - Chirieleison, Allen, McIver, Deiters, Ellington, & Chen
2:25	Size Does Matter: The Impact of Size on Hoarding Behaviour - Witkowski & Aubert	Generation and screening of genomic libraries using mariner transposons and Cre/lox - Enyeart, Barrick, Hunicke-Smith, Marcotte, & Ellington
2:50	Take me to your leader! Inferring leadership in animal groups on the move - Perony, Richardson, Manser, & Schweitzer	A Minimal Artificial Subcellular Matrix - Rasmussen & Hanczyc
3:15	The Evolution of Temporal Polyethism - Goldsby, Serra, Dyer, Kerr, & Ofria	Thermal cycling to increase the complexity of functional nucleic acids isolated from random sequence pools by in vitro selection and implications for prebiotic chemistry - Reba, Meyer, & Barrick
3:40	Snack Break: South Lobby	
	EiA II: System Design Chair: David Bryson	B&I II: Sensing and Communication Chair: Laura Grabowski
4:00	Automatically Designing and Printing Objects with EvoFab 0.2 - Kuehn & Rieffel	Testing the Variability Selection Hypothesis: The Adoption of Social Learning in Increasingly Variable Environments - Borg & Channon
4:25	Continuous in vitro Evolution of a Ribozyme Ligase: A Model Kit for The Evolution of a Biomolecule Continuous in vitro Evolution of a Ribozyme Ligase: A Model Kit for The Evolution of a Biomolecule - Ledbetter, Hwang, & Stovall	Informational Drives for Sensor Evolution - Van Dijk & Polani
4:50	Architectures for self-reproduction: abstractions, realisations and a research program - McMullin	Analysis of Evolved Agents Performing Referential Communication - Manicka
5:15	Digital Evolution Demonstrates Surprising Robustness to Poor Design Decisions - Bryson & Ofria	An Embodied Holistic Model of Ant Route Navigation - Baddeley, Graham, Husbands, & Philippides
5:40	Break	
6:30	Banquet and Keynote Address: Oron Catts (Stadium Tower, West Side of Stadium, Level 400)	

Saturday 21 July 2012

9:00	Keynote address: Benjamin Kerr (Kellogg Auditorium)	
10:20	Snack Break: South Lobby	
Time	Kellogg Auditorium	Lincoln Room
	CD II: Cooperation Chair: Arend Hintze	SB II: (Re)Construction of Life Chair: Betül Kacar
10:50	Effects of public good properties on the evolution of cooperation - Misevic, Frénoy, Parsons, & Taddei	Towards protocell embedded replication of nucleic acids - Löffler, Wieczorek, Wamberg, Dörr, Pedersen, Svaneborg, Fellermann, Edson, Cape, Ziock, Boncella, Rasmussen, & Monnard
11:15	The Role of Collective Working Memory in an Urban Pursuit Scenario - Winder & Reggia	Energy Uptake in Protocell Models: Towards Autonomous Function - Albertsen, Maurer, Cape, Fellermann, Boncella, Ziock, Rasmussen, & Monnard
11:40	odNEAT: An Algorithm for Distributed Online, Onboard Evolution of Robot Behaviours - Silva, Urbano, Oliveira, & Christensen	Evolutionary Transitions and Top-Down Causation - Walker, Cisneros, & Davies
12:05	Environment classification in multiagent systems inspired by the adaptive immune system - Tarapore, Christensen, Lima, & Carneiro	Towards the Recapitulation of Ancient History in the Laboratory: Combining Synthetic Biology with Experimental Evolution - Kacar & Gaucher
12:30	Lunch on your own (Brody Square, etc.)	
	EiA III: Experimental Evolution in Microbes Chair: Rich Lenski	AMP: Art and Philosophy Chair: Adam Brown
2:00	Evolution of Aging and Rejuvenation in Bacteria - Chao, Rang, & Peng	Biology of Digital Organisms: How Language Constructs Reality - Kramash-Stettiner
2:25	Adaptation and Divergence during Experimental Evolution of Multicellular <i>Saccharomyces cerevisiae</i> - Rebolleda-Gomez, Ratcliff, & Trivisano	Using Pictures to Visualize the Complexity of Gene Regulatory Networks - Cussat-Blanc & Pollack
2:50	Specialization by <i>Burkholderia cenocepacia</i> biofilm ecotypes limits adaptation in a planktonic environment - Ellis, Staples, & Cooper	The VIDA Art and Artificial Life Competition: Key Contributions to the Arts - Tenhaaf, Bello Bugallo, Cillari, Mariategui, Norman & Vanouse
3:15	Evidence of Speciation in an Experimental Population of <i>E. coli</i> Following the Evolution of a Key Adaptation - Blount & Lenski	Automated Evolution of Interesting Images - Auerbach
3:40	Snack Break: South Lobby	
	CD III: Networks and Topology Chair: Patrick Grim	B&I III: Robotics and Complexity Chair: Robert Pennock
4:00	Effects of Local Communication and Topology on Collective Movements - Eskridge	Evolutionary design and experimental validation of a flexible caudal fin for robotic fish - Clark, Moore, Wang, Tan, & McKinley
4:25	Contextual Geometric Structures: modeling the fundamental components of cultural behavior - Alicea	On the Relationship Between Environmental and Mechanical Complexity in Evolved Robots - Auerbach & Bongard
4:50	Finding Optimal Random Boolean Networks for Reservoir Computing - Snyder, Goudarzi, & Teuscher	Aracna: An Open-Source Quadruped Platform for Evolutionary Robotics - Lohmann, Gold, Blum, Yosinski, & Lipson
5:15	Polarization and Belief Dynamics in the Black and White Communities: An Agent-Based Network Model from the Data - Grim, Thomas, Fisher, Reade, Singer, Garza, Fryer, & Chatman	The Minimal Complexity of Adapting Agents Increases with Fitness - Joshi, Tononi, & Koch
5:40	Break	
6:00	Dinner on your own (Brody Square, etc.)	
7:00-10:00	Poster Session (Cash Bar Available)	

Sunday 22 July 2012

8:30	Keynote address: Steven A. Benner (Kellogg Auditorium)	
9:50	Snack Break: South Lobby	
Time	Kellogg Auditorium	Lincoln Room
10:20	EiA IV: Population Genetics Chair: Bjørn Østman	SB III: Analysis of Synthetic Systems Chair: Steen Rasmussen
10:20	A quantitative measure of non-neutral evolutionary activity for systems that exhibit intrinsic fitness - Droop & Hickinbotham	Statistical Analysis of Liposome Budding Dynamics Based on Free Energy Landscape - Tsuda, Suzuki, & Yomo
10:45	The role of deleterious mutations in the adaptation to a novel environment - Covert, Carlson-Stevermer, Derryberry, & Wilke	Numerical Artificial Chemistries - Ramírez & Marshall
11:10	What does sex have to do with it: tracking the fate of deleterious mutations in sexual populations - Covert, Smith, Derryberry, & Wilke	An evolutionary-genomics approach for elucidating and improving complex microbial phenotypes - Minty, Park, Wang, Lai, Zaroff, Johnson, Burns, Church, & Lin
11:35	Sexual Selection, Resource Distribution, and Population Size in Synthetic Sympatric Speciation - Woehrer, Hougen, & Schlupp	An artificial multivesicular in vitro system to emulate multicellular processes - Hadorn, Boerger, & Benner
12:00	Lunch on your own (Brody Square, etc.)	
1:00	Closing Remarks (Kellogg Auditorium)	
1:30	Business Meeting (Kellogg Auditorium)	