ALIFE 2022 Schedule

18th (Mon)	09:30 - 10:00	Conference opening by the Organizers					
18th (Mon)	10:00 - 10:20	Main track introduction				10:00 - 11:30	**Langtons Ant (I)**
18th (Mon)	10:20 - 10:40	Jonathan Lawry	Heterogeneity and Robustness in Social Learning				
18th (Mon)	10:40 - 11:00	Yasuhiro Shimada, Wataru Nog	Bottom-up formation of number representation and top-down understanding of symbolic manipulation				
18th (Mon)	11:00 - 11:15	Mikihiro Suda, Takumi Saito an	Exploration and exploitation of the adjacent possible space for open-endedness				
18th (Mon)	11:15 - 11:30	Joshua Bensemann, Padriac Am	Simulations and the evolution of consciousness				
18th (Mon)	11:30 - 11:50	Hiroki Sayama	A Partial Integro-Differential Equation-Based Model of Adaptive Social Network Dynamics			11:30 - 13:00	**Langtons Ant (II)**
18th (Mon)	11:50 - 12:10	Roger Tucker	Towards a Unified Framework for Technological and Biological Evolution				
18th (Mon)	12:10 - 12:30	Ndidi Bianca Ogbo, Theodor Cin	Shake on It: The Role of Commitments and the Evolution of Coordination in Networks of Technology Firms				
18th (Mon)	12:30 - 12:45	Alexander Lalejini, Austin J. Fer	The evolution of adaptive phenotypic plasticity stabilizes populations against environmental fluctuations				
18th (Mon)	12:45 - 13:00	James Garner and Matthew Egt	Is Prediction Required? Using Evolutionary Robotics to Investigate How Systems Cope with Self-Caused Stimuli				
18th (Mon)	LUNCH						
18th (Mon)	14:00 - 14:20	Tessa van der Heiden, Herke va	Reliably Re-Acting to Partner's Actions with the Social Intrinsic Motivation of Transfer Empowerment			14:00 - 15:30	**ERA Workshop**
18th (Mon)	14:20 - 14:40	Teruto Endo, Hirotake Abe and	Toward automatic generation of diverse congestion control algorithms through co-evolution with simulation environments				
18th (Mon)	14:40 - 15:00	Bente Riegler, Daniel Polani anc	The Information Complexity of Navigating with Momentum				
18th (Mon)	15:00 - 15:15	Manh Hong Duong Duong and T	Cost-efficiency of institutional reward and punishment in cooperation dilemmas				
18th (Mon)	15:15 - 15:30	Matthew Egbert	Towards Adaptive Sensorimotor Autonomy: Developing a system that can adapt to its own emergent and dynamic needs				
18th (Mon)	15:30 - 15:50	Claire Schregardus, Michael Wis	Dirty Transmission Hypothesis: Increased Mutations During Horizontal Transmission Can Select for Increased Levels of Mutualism in Endosymbionts			15:30 - 17:00	**WiDWS**
18th (Mon)	15:50 - 16:10	Matthew Andres Moreno, Emily	Hereditary Stratigraphy: Genome Annotations to Enable Phylogenetic Inference over Distributed Populations				
18th (Mon)	16:10 - 16:30	Jonathan Young and Simon Colt	Finding Chemical Organisations in Matter-Conserving AChems				
18th (Mon)	16:30 - 16:45	Michael Wong and Stuart Bartle	On the Trajectories of Planetary Civilizations: Asymptotic Burnout vs. Homeostatic Awakening				
18th (Mon)	17:00 - 18:00	**Keynote: Rob Dunn**					
19th (Tue)	09:00 - 10:00	**Keynote: Masatoshi Funabashi**					
19th (Tue)	10:20 - 10:40	Tadayuki Matsumura, Kanako E	Empathic Active Inference: Active Inference with Empathy Mechanism for Socially Behaved Artificial Agent			10:00 - 11:30	**CHEMALIFORMS II**
19th (Tue)	10:40 - 11:00	David Herel, Dominika Zogatova	Emergence of Novelty in Evolutionary Algorithms				
19th (Tue)	11:00 - 11:15	Lukas Bostelmann-Arp, Andrea	Multi-Objective Evolutionary Game Theory: A case study in cancer therapy				
19th (Tue)	11:15 - 11:30	Martin Stefanec and Thomas Sc	PPS3D: A 3D Variant of the Primordial Particle System				
19th (Tue)	11:30 - 11:50	Kasper Stoy	Towards Computationally Efficient Evolutionary Robotics	11:30 - 12:00	Special Session **Alife and Society**: Invited Talk (TBC)	11:30 - 13:00	**OGD-CLEA (I)**
19th (Tue)	11:50 - 12:10	Mia-Katrin Kvalsund, Kyrre Glet	Centralized and Decentralized Control in Modular Robots and The	12:00 - 12:20	Juste Raimbault	Innovation and informal knowledge ex	
19th (Tue)	12:10 - 12:30	Arend Hintze, Yasir Imam and L	Testing the Efficiency of a Genome-Wide Association Study on a C	12:20 - 12:40	Imran Khan and Christopher S	A Participatory Complex Systems Mod	
19th (Tue)	12:30 - 12:45	The Anh Han, Francisco C. Sant	Voluntary safety pledges overcome over-regulation dilemma in AI	12:40 - 13:00	Alan Dorin, Alexandra Penn an	AgTech that doesn't cost the Earth: Cre	
19th (Tue)	12:45 - 13:00	Peter Eggenberger Hotz, Federi	Simulations of Vesicular Distanglement				
19th (Tue)	LUNCH						
19th (Tue)	14:00 - 14:20	Jacob Schoemaker and Karine M	The benefits of credit assignment in noisy video game environments	Hiroki Sayama	Detecting New Phase Transition Points	14:00 - 15:30	**OGD-CLEA (II)**
19th (Tue)	14:20 - 14:40	Thomas Willkens and Jordan Po	Evolving Unbounded Neural Complexity in Pursuit-Evasion Games	Rudolf M. Füchslin, Krütli Pius,	Minimal Models for Spatially Resolved		
19th (Tue)	14:40 - 15:00	Federico Pigozzi	Shape Change and Control of Pressure-based Soft Agents				
19th (Tue)	15:00 - 15:15	Marcus Krellner and The Anh Hi	The Last One Standing? Recent Findings on the Feasibility of Indirect Reciprocity u	Panel Discussion: Closing the Loop on COVID19 Modelling			
19th (Tue)	15:15 - 15:30	Wiktoria Rajewicz, Thomas Schi	Lifeforms potentially useful for automated underwater monitoring systems				
19th (Tue)	15:30 - 15:50	Dieu My Nguyen, Michael Iuzzo	Physical Obstacles Constrain Behavioral Parameter Space of Successful Localization in Honey Bee Swarms				
19th (Tue)	15:50 - 16:10	Eduardo J. Izquierdo, Gabriel J.	Perpetual Crossers without Sensory Delay: Revisiting the Perceptual Crossing Simulation Studies			15:30 - 17:00	**Symbulation Tutorial**
19th (Tue)	16:10 - 16:30	Chantal Nguyen, Isabella Huang	Firefly-inspired vocabulary generator for communication in multi-agent systems				
19th (Tue)	16:30 - 16:45	Hiroyuki Iizuka, Taiki Sasaki, Wa	Generation of Complex Patterns using Coupled Generative Adversarial Networks				
19th (Tue)	16:45 - 17:00	[None]					
19th (Tue)	17:00 - 18:00	**Keynote: Melanie E. Moses**					

20th (Wed)	09:00 - 10:00	**Keynote: Job Boekhoven**				
20th (Wed)	10:00 - 10:20	Alexander Morsdvintsev, Ettore	Growing Isotropic Neural Cellular Automata			10:00 - 11:30 **Simulating pandemics with ABM**
20th (Wed)	10:20 - 10:40	Christopher Bennett, Seth Bullo	Exploiting Intrinsic Multi-Agent Heterogeneity for Spatial Interference Reduction i	**Hybrid Life V** Invited talk: Yanpei Huang and Jonathan Eden	Robotic human movement augmentation: principles, challenges, open questions and pilot studies	
20th (Wed)	10:40 - 11:00	Arend Hintze and Jory Schossau	Towards an FPGA Accelerator for Markov Brains			
20th (Wed)	11:00 - 11:15	Timothy Atkinson and Nihat Eng	Self Recognition as Optimisation			
20th (Wed)	11:15 - 11:30	Shuto Kuriyama, Wataru Noguc	Gradient Climbing Neural Cellular Automata			
20th (Wed)	11:30 - 11:50	Olaf Witkowski and Eric Schwitz	Ethics of Artificial Life: The Moral Status of Life as It Could Be	Margareta Segerståhl and Bori	Modeling the Cell as a Network of Para	11:30 - 13:00 **LIFELIKE 2022(I)**
20th (Wed)	11:50 - 12:10	Ana Rubio Denniss, Laia Freixas	Q-learning for real time control of heterogeneous microagent collective	Fernando Rodriguez	Inside looking out? Autonomy, phenon	
20th (Wed)	12:10 - 12:30	Andrea Ferigo, Lisa Soros, Eric M	On the Entanglement between Evolvability and Fitness: an Experimental Study on	Jonas Rockbach, Luka-Franzisk	Towards Hierarchical Hybrid Architectu	
20th (Wed)	12:30 - 12:45	Marco Villani, Gianluca D'Addes	Pseudo-attractors in Random Boolean Network Models and Single-Cell Data			
20th (Wed)	12:45 - 13:00	Reiji Suzuki, Shinji Sumitani, Chi	A Modeling and Experimental Framework for Understanding Evolutionary and Ecological Roles of Acoustic Behavior Using a Generative Model			
20th (Wed)	LUNCH					
20th (Wed)	14:00 - 14:20	Stefano Furlan, Eric Medvet, Gi	On the Mutual Influence of Human and Artificial Life: an Experimental Investigation			14:00 - 15:30 **LIFELIKE 2022(II)**
20th (Wed)	14:20 - 14:40	Harry Booth and Peter J. Bentle	The Evolution of Fractal Protein Modules in Multicellular Development			
20th (Wed)	14:40 - 15:00	Johannes Josef Schneider, Aless	Paths in a Network of Polydisperse Spherical Droplets			
20th (Wed)	15:00 - 15:20	Lorenzo Cavuoti, Francesco Sac	Adversarial Takeover of Neural Cellular Automata			
20th (Wed)	15:20 - 15:40	Kiara Johnson, Piper Welch, Em	Endosymbiosis or Bust: Influence of Ectosymbiosis on Evolution of Obligate Endosymbiosis			15:30 - 17:00 **Web Hackathon**
20th (Wed)	15:40 - 16:00	Alison Cameron, Seth Dorchen,	Keep Your Frenemies Closer: Bacteriophage That Benefit Their Hosts Evolve to be More Temperate			
20th (Wed)	16:00 - 16:20	Q. Tyrell Davis	Glaberish: Generalizing the Continuously-Valued Lenia Framework to Arbitrary Life-Like Cellular Automata			
20th (Wed)	16:20 - 16:40	Babak Hodjat, Hormoz Shahrzad	DIAS: A Domain-Independent Alife-Based Problem-Solving System			
20th (Wed)	17:00 - 18:00	**Keynote: Susanne Still**				

21st (Thu)	09:00 - 10:00	**Keynote: Dora Tang**		
21st (Thu)	10:00 - 11:30	**Special Session Artificial Perception II (ArtPerc II)**		10:00 - 11:30 **ALife Ethics (I)**
21st (Thu)	10:05 - 10:35	Alexander Mordvinstev	Invited talk by Alexander Mordvinstev, creator of DeepDream and co-creator of Neural Cellular Automata	
21st (Thu)	10:35 - 10:55	Inman Harvey	Navigating blind without a map: models of active wayfinding	
21st (Thu)	10:55 - 11:10	Pasquale Stano, Giordano Ramp	Pier Luigi Gentili and Luisa Damiano, En route for implanting a minimal chemical perceptron into artificial cells	
21st (Thu)	11:10 - 11:25	Michael Vogrin, Guilherme Woc	Modelling a Common Cognitive Bias and a Simple Heuristic to Overcome it	
21st (Thu)	11:30 - 12:00	[None]		11:30 - 13:00 **ALife Ethics (II)**
21st (Thu)	12:30 - 13:00	[None]		
21st (Thu)	LUNCH			
21st (Thu)	14:00 - 14:20	Vincent Ragusa and Clifford Bol	Augmenting Evolution with Bio-Inspired “Super Explorers”	14:00 - 15:30 **ABMHuB'22 (I)**
21st (Thu)	14:20 - 14:40	Jacob Ashworth, Lyra Lee, Jacks	Evolution of Developmental Strategies in NK Fitness Landscapes	
21st (Thu)	14:40 - 15:00	Jonathan Bowen	Two Theories of Responsiveness	
21st (Thu)	15:00 - 15:20	Anya Vostinar, Katherine Skoce	Symbiosis in Digital Evolution: A Review and Future Directions	
21st (Thu)	15:20 - 15:40	Eduardo J. Izquierdo and Madh	What does functional connectivity tell us about the behaviorally functional connectivity of a multifunctional neural circuit?	15:30 - 17:00 **ABMHuB'22 (II)**
21st (Thu)	15:40 - 16:00	Katherine G. Skocelas, Austin J.	The Evolution of Genetic Robustness for Cellular Cooperation in Early Multicellular Organisms	
21st (Thu)	16:00 - 16:20	Mohiul Islam, Nawwaf Kharma	String: a programming language for the evolution of ribozymes in a new computational protocell model	
21st (Thu)	16:20 - 16:40	Penelope Faulkner Rainford and	Lineage Selection in Mixed Populations for Genetic Improvement	
21st (Thu)	17:00 - 18:00	**Keynote: David O. Obura**		
21st (Thu)	18:00 - 18:30	[None]		18:00 - 19:30 **Extracurricular ERA social event**
21st (Thu)	18:30 - 19:00	[None]		
21st (Thu)	19:00 - 19:30	[None]		

22nd (Fri)	09:00 - 10:00	**Keynote: Stuart Bartlett**		
22nd (Fri)	10:01 - 10:20	**Special Session Artificial Life Journal: Susan Stepney - opening remarks**		10:00 - 11:30 **SB-AI 7 (I)**
22nd (Fri)	10:20 - 10:40	Eric Peña, Hiroki Sayama	"Life Worth Mentioning: Complexity in Life-Like Cellular Automata	
22nd (Fri)	10:45 - 11:05	Tran Nguyen Minh-Thai, Sandhy	"A Comprehensive Conceptual and Computational Dynamics Framework for Autonomous Regeneration Systems"	
22nd (Fri)	11:10 - 11:20	Abeba Birhane	"The Impossibility of Automating Ambiguity"	
22nd (Fri)	11:35 - 11:55	Shane St. Luce, Hiroki Sayama	"Network-Based Phase Space Analysis of the El Farol Bar Problem"	11:30 - 13:00 **SB-AI 7 (II)**
22nd (Fri)	11:55 - 12:30	[None]		
22nd (Fri)	12:40 - 13:00	[None]		
22nd (Fri)	LUNCH			
22nd (Fri)	14:00 - 14:20	Kira Breithaupt and Abe Leite	Analogical comparison of circuits generating a multiply realizable walking behavior	14:00 - 15:30 **VCC Workshop**
22nd (Fri)	14:20 - 14:40	Theodor Cimpeanu, Francisco C	Network Diversity Promotes Safety Adoption in Swift Artificial Intelligence Development	
22nd (Fri)	14:40 - 15:00	Q. Tyrell Davis	Step Size is a Consequential Parameter in Continuous Cellular Automata	
22nd (Fri)	15:00 - 15:20	Emily Dolson, Anya Vostinar, Sh	Evolutionary stability of host-endosymbiont mutualism is reduced by multi-infection	
22nd (Fri)	15:30 - 17:00	ISAL session, life achievement and other awards		
22nd (Fri)	17:00 - 17:45	Closing remarks		