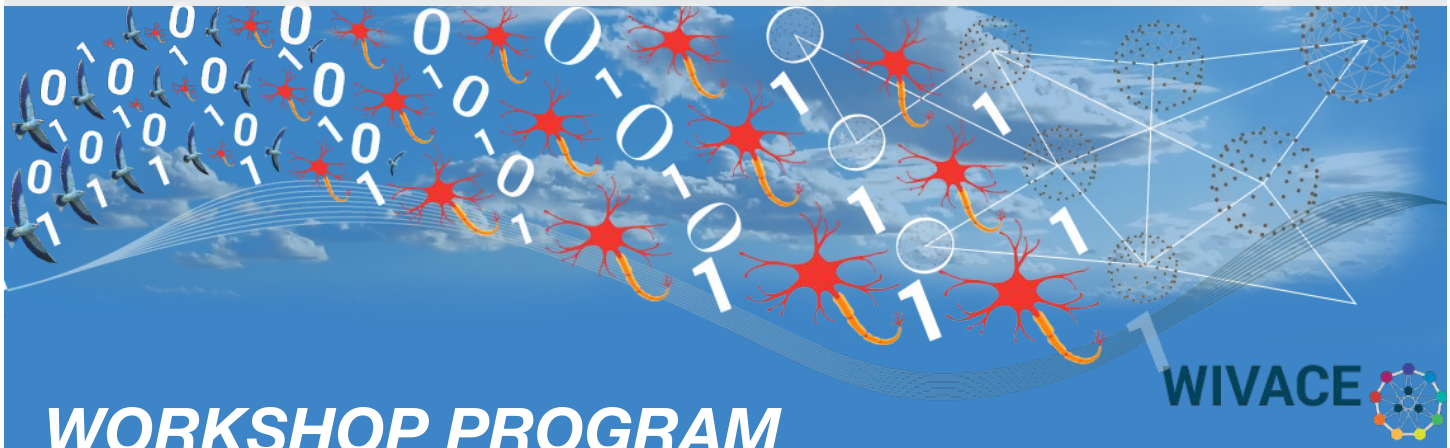
European Centre for Living Technology



WORKSHOP PROGRAM

XII Workshop on Artificial Life and Evolutionary Computation

Venice, 19-21 September 2017

CFZ - Cultural Flow Zone
Zattere al Pontelungo, Dorsoduro 1392, Venezia

For info please visit: http://wivace.org/2017

Università Ca'Foscari Venezia
Dipartimento di Scienze Ambientali, Informatica e Statistica

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Ca'Foscari Zattere
Cultural Flow Zone

TUESDAY, SEPTEMBER 19th

10.30-11.30	Registration	
11.30-11.45	Opening: Marcello Pelillo (ECLT Director), Roberto Serra (WIVACE general chair)	

MORNING SESSION

11.45-12.05	Clara Pizzuti and Annalisa Socievole	Multiple Network Motif Clustering with Genetic Algorithms
12.05-12.25	Marco Baioletti, Alfredo Milani and Valentino Santucci	Algebraic perspectives of solutions spaces in combinatorial optimization
12.25-12.45	Delphine Nicolay and Timoteo Carletti	Quantum Neural Networks Implementing Deutsch-Jozsa Algorithm

AFTERNOON SESSION

14.15-15.00	**Invited speaker: Erik Schultes**	**Harnessing Open Science to Map Protein Fitness Landscapes**
15.00-15.20	Stefano Piotto, Luigi Di Biasi, Lucia Sessa, Pio Iannelli and Simona Concilio	Biological inspired metrics for alignment free sequences analysis
15.20-15.40	Tobia Calenda, Alessandro Vitale, Antonino Di Stefano, Vincenzo Cutello and Mario Pavone	Optimizing the Individuals Maturation for Maximizing the Evolutionary Learning
15.40-16.00	Jan Paredis	Evolving Genotype Phenotype Mappings as Dynamical Systems
16.00-16.30	**Coffee break**	
16.30-16.50	Debora Slanzi, Valentina Mameli, Marina Khoroshiltseva and Irene Poli	Evolving multi-objective optimization in high dimensional systems
16.50-17.10	Federico Rossi, Kristian Torbensen, Sandra Ristori and Ali Abou-Hassan	Control of signal transduction and communication through model membranes in networks of coupled chemical oscillators
17.10-17.30	Marcello Budroni, Mauro Rustici, Nadia Marchettini and Federico Rossi	Controlling chemical chaos in the Belousov-Zhabotinsky oscillator
17.30-17.50	Lucia Sessa, Luigi Di Biasi, Pio Iannelli, Simona Concilio and Stefano Piotto	Fragment based molecular dynamics for drug design

WEDNESDAY, SEPTEMBER 20th

MORNING SESSION

09.30-10.15	**Invited speaker: Rudolf Marcel Fuchslin**	**Applied Complex Systems Sciences**
10.15-10.35	Andrea Roli, Antoine Ligot and Mauro Birattari	A study on complexity measures for the automatic design of robot swarms
10.35-10.55	Marco Villani, Laura Sani, Michele Amoretti, Emilio Vicari, Riccardo Pecori, Monica Mordonini, Stefano Cagnoni and Roberto Serra	Inferring Global Properties of Biological Networks with a Relevance Index Method
10.55-11.15	Gianluigi Silvestri, Laura Sani, Michele Amoretti, Riccardo Pecori, Emilio Vicari, Monica Mordonini and Stefano Cagnoni	K-means PSO for searching relevant variable sets
11.15-11.40	**Coffee break**	
11.40-12.00	Riccardo Righi	Functional interactions in socio-economic complex networks: detection of subsets of agents through the application of the Relevant Index (RI)
12.00-12.20	Sofia Samoili, Riccardo Righi, Montserrat Lopez-Cobo and Giuditta De Prato	Modelling Emerging Topics in a Techno-Economic Segment (TES) Network
12.20-12.40	Debora Slanzi, Valentina Anzoise and Irene Poli	Modeling emerging topics on sustainable urban development perception: the case of Hangzhou Future Sci-Tech City
12.40-13.00	Fabio Della Marra	A genetic approach to the calibration of selected dynamic factor models for macroeconomic forecasting
13.00-13.20	Salvatore di Gregorio	Urban Evacuation Plan: a Simulation Study with Cognitive Agents in a Cellular Automata Context

WEDNESDAY, SEPTEMBER 20th

AFTERNOON SESSION

14.45-15.30	**Invited speaker: Stuart Alan Kauffman**	**A World Beyond Physics**
15.30-15.50	Sara Montagna, Michele Braccini and Andrea Roli	The impact of self-loops in random boolean network dynamics
15.50-16.10	Davide Sapienza, Marco Villani and Roberto Serra	On the dynamical properties of a gene-protein model
16.10-16.30	Braccini Michele, Andrea Roli, Marco Villani and Roberto Serra	Threshold ergodic sets vs. stochastic simulation of noisy boolean networks: comparison of two approaches for modelling cell differentiation
16.30-17.00	**Coffee break**	
17.00-17.20	Martina Musa, Marco Villani and Roberto Serra	Simulating a population of protocells with uneven division
17.20-17.40	Marco Pedicini, Maria Concetta Palumbo and Filippo Castiglione	Attractors in synchronous and asynchronous genetic regulatory networks
17.40-18.00	Angela Lombardi, Sabina Tangaro, Roberto Bellotti, Angelo Cardellicchio and Cataldo Guaragnella	Identication of "Die Hard" Nodes in Complex Networks
18.00-19.00	**Wivace committee meeting**	
Evening	**Social Dinner**	

THURSDAY, SEPTEMBER 21th

09.20-09.30	WIVACE & INFOLIFE day welcome address: Roberto Serra (WIVACE general chair)	
MORNING SESSION		
09.30-10.15	**Invited speaker: Steen Rasmussen**	**The brave new world of living and intelligent technologies**
10.15-10.35	Raffaele D'Ambrosio, Martina Moccaldi, Federico Rossi and Beatrice Paternoster	Stochastic numerical modeling of selected oscillatory phenomena
10.35-10.55	Pasquale Palumbo, Marco Vanoni, Federico Papa, Stefano Busti, Meike Wortel, Bas Teusink and Lilia Alberghina	An integrated metabolism, growth and cell cycle model quantitatively describing budding yeast growth
10.55-11.15	Samuel Oliveira, Mohamed Bahrudeen, Sofia Startceva and Andre Ribeiro	Estimating the multi-scale effects of extrinsic noise on genes and circuits activity from an empirically validated model of transcription kinetics
11.15-11.45	**Coffee break**	
11.45-12.30	**Invited speaker: Roberto Taramelli**	**Contrasting views of the origin of human cancers**
12.30-12.50	Luisa Damiano and Pasquale Stano	SB-AI: How the synthetic biology paradigm is impacting AL and AI research
12.50-13.10	Chiara Damiani, Riccardo Colombo, Diletta Paone, Giancarlo Mauri and Dario Pescini	Relevant fluxes in metabolic steady-states
13.10-13.20	**Closing**	
Afternoon	**InfoLife workshop**	