

# ITALIAN WORKSHOP ON ARTIFICIAL LIFE AND EVOLUTIONARY COMPUTATION PROGRAM

## Wednesday, May 14

9:30 AM – 10:00 AM Registration

10:00 AM – 11:00 AM Invited Speaker

### **Enrique Alba**

*Intelligent Systems for Smart Mobility and Smart Cities*

11:00 AM – 11:30 AM Coffee Break

11:30 AM – 12:50 AM Session 1 : Chaired by Stefano Cagnoni

Stefano Pizzuti, Imran Khan, Alfonso Capozzoli, Fiorella Lauro and Stefano Corgnati

*Building energy management through fault detection analysis using pattern recognition techniques applied on residual neural networks*

Matteo Borrotti, Debora Slanzi, Davide De March, Daniele Orlando, Silvio Giove and Irene Poli

*Qualitative Particle Swarm Optimization (Q-PSO) for energy efficient building design*

Fabio Mavelli, Giordano Rampioni, Luisa Damiano, Marco Messina, Livia Leoni and Pasquale Stano

*One-way molecular communication between synthetic and natural cells: preliminary in silico modeling*

Pasquale Stano, Florian Wodlei, Paolo Carrara, Sandra Ristori, Nadia Marchettini and Federico Rossi

*Approaches to molecular communication between synthetic compartments based on encapsulated chemical oscillators*

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15:00 PM – 16:00 PM Invited Speaker

### **Yaroslav D. Sergeyev**

The Infinity Computer and numerical computations with infinities and infinitesimals.

16:00 PM – 16:30 PM Coffee Break

16:30 PM – 17:50 PM Session 2 : Chaired by Marco Villani

Roberto Ugolotti and Stefano Cagnoni

*Multi-Objective Parameter Tuning for PSO-based Point Cloud Localization*

Alessandro Filisetti, Marco Villani, Andrea Roli, Marco Fiorucci, Irene Poli and Roberto Serra

*On some properties of information theoretical measures for the study of complex systems*

Marcelo Lacerda and Fernando B. De Lima Neto

*A Multithreaded Implementation of the Fish School Search Algorithm*

Giuseppe Filippone, Roberto Parise, Davide Spataro, Donato D'Ambrosio, Rocco Rongo and William Spataro

*Evolutionary applications to Cellular Automata models for volcano risk mitigation*

18:00 PM – 19:00 PM WIVACE Steering Committee Meeting

## Thursday, May 15

09:00 AM – 11:00 AM *Session 3 : Chaired by Stefano Pizzuti*

Nicolas Jakob and Carlos Andrés Peña  
*Living Emerging Worlds for Games*

Delphine Nicolay, Andrea Roli and Timoteo Carletti  
*Learning multiple conflicting tasks with artificial evolution*

Daniela Pacella, Onofrio Gigliotta and Orazio Miglino  
*Studying the Evolutionary Basis of Emotions through Adaptive Neuroagents. Preliminary settings and results*

Alessandro Filisetti, Marco Villani, Chiara Damiani, Alex Graudenzi, Andrea Roli, Wim Hordijk and Roberto Serra  
*On RAF sets and autocatalytic cycles in random reaction networks*

Anna Russo, Onofrio Gigliotta, Francesco Palumbo and Orazio Miglino  
*Introducing Interactive Evolutionary Computation in Data Clustering*

Alex Graudenzi, Chiara Damiani, Andrea Paroni, Alessandro Filisetti, Marco Villani, Roberto Serra and Marco Antoniotti  
*Investigating the role of network topology and dynamical regimes on the dynamics of a cell differentiation model*

11:00 AM – 11:30 AM *Coffee Break*

11:30 AM – 12:30 AM *Invited Speaker*

### **Roberto Serra**

*Random Reaction Networks*