

Welcome to WIVACE 2012 and welcome to Parma!

WIVACE is the acronym for Workshop Italiano di Vita Artificiale e Computazione Evolutiva (Italian Workshop on Artificial Life and Evolutionary Computation).

It was first held in 2007, as the incorporation of two previously separately running workshops (WIVA and GSICE) on the two topics, which had already been held concurrently the former year in Siena, and was followed by two other editions, held in Venice and Naples.

In 2007 the success of the newly born event, and of the summer school that had been organized aside of it, were favored by the warm and welcoming sun of Sicily.

At the time of writing, less than a week before the workshop, we are well below zero here in Parma, with still a lot of snow on the ground, such that the athletics track and the nearby football fields in our Campus are being used as tracks for cross-country skiing.

Even if the weather forecast, at least as regards air temperature, is favorable, we definitely cannot rely on the same exceptional environmental conditions as in 2007 for making this a 'hot' event.

Nevertheless, the list of papers selected for presentation at this workshop, collected in this CD and, even more, the world-famous scientists who will offer two very inspiring invited talks and two cutting-edge tutorials should be enough to keep the temperature of the event high.

The papers collected in these proceedings cover topics that span much more widely over different disciplines than the workshop title might suggest, dealing with and hybridizing research topics such as biological models, learning, adaptive and complex systems, biologically-inspired computational models, evolution, as well as real-world applications.

In fact, one of the major goals aimed at when WIVACE was created was to offer a forum where different disciplines could meet which usually, at an international level, have their own audience and develop in rather closed and protected environments. Running an event at a national level, where single research 'niches' are often too little populated to allow for their own event to be created, favors these hybridizations which sometimes lead to what, in evolutionary computation terms, may be defined as surprisingly effective 'crossovers'. Despite its national scope, WIVACE 2012 features contributions from three different continents, including papers from Europe as well as from the United States, Turkey, and Japan.

From another viewpoint, small events like WIVACE are usually a very nice opportunity for new-generation or soon-to-be scientists to get in touch with new subjects in a more relaxed, informal, and (last but not least) less expensive environment than in large-scale international conferences. Diversity and renovation are key requirements for species to survive in nature as well as in science, and we hope that the many young scientists that will attend WIVACE will contribute to make the scientific communities involved in the workshop more and more lively and healthy over the years.

Surely, they will find much to learn from and much inspiration in the invited talks by Riccardo Poli and Domenico Parisi, as well as in the tutorials by Marco Tomassini and Christian Müller-Schloer.

Finally, just a few words to acknowledge and thank the scientific and financial sponsors of the event: the University of Parma for allowing us to hold WIVACE at the S. Elisabetta auditorium in the University Campus, Fondazione Cariparma for their substantial economic support, the Italian Association for Artificial Intelligence (AI\*IA) for their scientific sponsorship and AWARENESS, the FP7 Coordination Action which has sponsored Prof. Parisi's invited talk and the best-paper award.

We do hope you will enjoy the workshop.

Stefano Cagnoni      Marco Mirolli      Marco Villani  
WIVACE 2012 co-chairs