

Genetic and Evolutionary Computation Medical Applications

Edited by

Stephen L. Smith

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Studi di Parma, Parma, Italy*



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About the Editors

Stephen L. Smith received a BSc in Computer Science and then an MSc and PhD in Electronic Engineering from the University of Kent, UK. He is currently a senior lecturer in the Department of Electronics at the University of York, UK.

Stephen's main research interests are in developing novel representations of evolutionary algorithms, particularly with application to problems in medicine. His work is currently centred on the diagnosis of neurological dysfunction and analysis of mammograms. The former is currently undergoing clinical trials and being registered for a patent.

Stephen was program chair for the Euromicro Workshop on Medical Informatics, program chair and local organizer for the Sixth International Workshop on Information Processing in Cells and Tissues (IPCAT), and guest editor for the subsequent special issue of *BioSystems* journal. Most recently he was tutorial chair for the IEEE Congress on Evolutionary Computation (CEC) in 2009. Stephen is Associate Editor for *Genetic Programming and Evolvable Machines* journal, the *Journal of Artificial Evolution and Applications*, and a member of the editorial board for the *International Journal of Computers in Healthcare*. Along with Stefano Cagnoni, Stephen co-founded the annual GECCO Workshop on Medical Applications of Genetic and Evolutionary Computation which is now in its seventh year.

Stefano Cagnoni graduated in Electronic Engineering at the University of Florence in 1988 where he was a PhD student and a post-doc until 1997. In 1994 he was a visiting scientist at the Whitaker College Biomedical Imaging and Computation Laboratory at the Massachusetts Institute of Technology. Since 1997 he has been with the University of Parma, where he has been Associate Professor since 2004.

Stefano's main basic research interests concern soft computing, with particular regard to evolutionary computation and computer vision. As concerns applied research, the main topics of his research are the application of the above-mentioned techniques to problems in computer vision, pattern recognition and robotics. Recent research grants regard: co-management of a project funded by Italian Railway Network Society (RFI) aimed at developing an automatic inspection system for train pantographs; a 'Marie Curie' grant, for a four-year research training project in Medical Imaging using Bio-Inspired and Soft Computing; a grant from 'Compagnia di S. Paolo' on 'Bioinformatic and experimental dissection of the signalling pathways underlying dendritic spine function'.

Stefano was Editor-in-chief of the *Journal of Artificial Evolution and Applications* from 2007 to 2009 and has been chairman of EvoIASP since 1999 (an event dedicated to evolutionary computation for image analysis and signal processing). Stefano is also a co-editor of special issues of journals dedicated to Evolutionary Computation for Image Analysis and Signal Processing and has been a reviewer for international journals and a member of the committees of several conferences. He is a member of the Advisory Board of Perada, the UE Coordination Action on Pervasive Adaptation and has recently been awarded the 'Evostar 2009 Award', in recognition of his most outstanding contribution to Evolutionary Computation.

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