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Vito Di Gesù   Sankar Kumar Pal
Alfredo Petrosino (Eds.)

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8th International Workshop, WILF 2009
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Vito Di Gesù
Università di Palermo
Dipartimento di Matematica e Applicazioni
Via Archirafi 34, 90123 Palermo, Italy
E-mail: vito.digesu@unipa.it

Sankar Kumar Pal
Indian Statistical Institute
Center for Soft Computing Research
Machine Intelligence Unit
203 Barrackpore Trunk Road, Kolkata 700 108, India
E-mail: sankar@isical.ac.in

Alfredo Petrosino
Università di Napoli "Parthenope"
Dipartimento di Scienze Applicate
Centro Direzionale, Isola C4, 80143 Napoli, Italy
E-mail: alfredo.petrosino@uniparthenope.it

Preface

The 8th International Workshop on Fuzzy Logic and Applications (WILF 2009) held in Palermo (Italy), June 9-12, 2009, covered topics related to theoretical and experimental areas of fuzzy sets and systems with emphasis on different applications.

This event represents the continuation of an established tradition of biannual interdisciplinary meetings. The previous editions of WILF were held, with an increasing number of participants, in Naples (1995), Bari (1997), Genoa (1999), Milan (2001), Naples (2003), Crema (2005) and Camogli (2007). Each event focused on distinct main thematic areas of fuzzy logic and related applications.

WILF 2009 aimed to highlight connections and synergies of fuzzy sets theory with nonconventional computing (e.g., neural networks, evolutionary computation, support vector machines, molecular computing, quantum computing) and cognitive science, in order to reach a better understanding of both natural and artificial complex systems as well as computing systems, inspired by nature, which are able to solve complex problems. From this perspective one of the main goals of the WILF workshops is to bring together researchers and developers from both academia and high-tech companies.

WILF 2009 received more than 60 paper submissions from all over the world, including Algeria, Belgium, Benin, Brazil, Canada, China, France, Greece, India, Iran, Italy, Japan, Poland, Romania, Slovakia, Spain and the USA. A rigorous peer-review selection process was applied to ultimately select nearly 40 high-quality manuscripts to be published in this volume.

Moreover, the volume also includes presentations from three keynote speakers Etienne Kerre (Ghent University, Belgium), Sankar K. Pal (ISI, India) and Enric Trillas (ECSC, Spain).

The success of this conference is to be credited to the contributions of many people. Special thanks go to the Program Committee members for their commitment to the task of providing high-quality reviews, and to the local Organizing Committee.

We cannot conclude without expressing our deepest gratitude to Giosué Lo Bosco and Cesare Valenti from the University of Palermo, who contributed to the organization of the workshop with the same passion and rigor that they apply in their scientific research. Without their help such a great and very special event could not have been organized.

March 2009

Vito Di Gesù
Sankar Kumar Pal
Alfredo Petrosino

To Our Friend Vito Di Gesú

Professor Vito Di Gesú passed away on March 15, 2009 at the age of 63 after a courageous struggle with a terminal illness.

Vito Di Gesú was one of the leading researchers in image analysis and pattern recognition after he joined the computer science group at the University of Palermo, where he served as a Full Professor and founded the PReDiGe research group.

In 1994 he was honored with the IAPR Fellowship at the very first assignment and with the Mahalanobis prize. Former President of GIRPR (the IAPR Italian Society), Vito Di Gesú initiated from 1986 its IAPR-TC13 on Pattern Recognition in Astronomy and Astrophysics. He was responsible for several projects for the Italian Ministry of Scientific Research and the Italian Space Agency; moreover, he was the national coordinator and member of the governing boards of several European projects. He served as member of the governing board of CINI (Italian Interuniversity Consortium in Informatics) and, at Palermo University, as research director of the CINI research unit, taking responsibility for the consortium COMETA and for the Socrates/Erasmus program on computer science.

Vito Di Gesú had a wide impact on our fields of research and pattern recognition at large, through authoring a large number of quality papers and co-editing more than two dozen books, organizing a dozen conferences and participating in about 60 conferences as a member of different committees.

His career was marked by remarkable productivity. His research interests originated from computer architectures like pyramids for computer vision to symmetry theory, passing through relevant results about intelligent clustering. As for applications, on top of his maintained interest in astronomy and astrophysics, to which he was applying his research on data mining and information fusion, we can cite his contributions in remote sensing and biomedical engineering, e.g., discrete tomography and diagnosis from image analysis.

He contributed significantly to spreading results through the Computer Architecture and Machine Perception (CAMP) workshops, sponsored by IEEE, and International Conferences on Image Analysis and Processing (ICIAP), sponsored by IAPR, of which he was a constant supportive participant and organizer. His interests in new disciplines and cross-fertilization between various fields took their meaning in organizing a series of workshops on Human – Machine Perception (HMP), where his contribution was really decisive, up to the very successful Workshop on Data Analysis in Astronomy (ADA) in 2007 where cosmology got connected with bioinformatics.

His current research dealt mainly with the origin of the synergy between the fields of soft computing and artificial vision, not only doing research by himself

in fuzzy clustering or genetic algorithms, but also participating actively in the success of our WILF conference series, since his first chairing in Naples in 2003.

He had been associated with the Indian Statistical Institute (ISI) for the last 20 years. He had a magical power of establishing both personal and professional friendship along with scientific collaboration with scientists of different institutions spread all over the world. He first visited ISI in 1988 in connection with an international conference and since then visited at least ten times, including his recent participation in PReMI-05 and PReMI-07 as invited speaker. He was actively connected with the "Center for Soft Computing Research: A National Facility" at ISI since its inception in 2004.

Vito Di Gesú was basically a man of many dimensions. He touched every one of us in a different way, both personally and professionally. We very much regret that some of you will not have the occasion to ever meet him. He would have surely deeply touched every one of you!

Vito, although of poor health, organized WILF 2009 with the enthusiasm of always.

We hope that WILF 2009 will serve both as a reminder of our loss and an inspiration as we venture toward other frontiers.

His friendly demeanor and hearty laugh are difficult to forget.

Sankar Kumar Pal
Alfredo Petrosino

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