Rudolf Seising and Veronica Sanz (Eds.)

Soft Computing in Humanities and Social Sciences

Studies in Fuzziness and Soft Computing, Volume 273

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Preface

The field of Soft Computing in Humanities and Social Sciences is at a turning point. Not very long ago, the very label seemed a little bit odd. Soft Computing is a technological field while Humanities and Social Sciences fall under the other pole of the "two cultures" defined by C.P. Snow in 1959. In the recent years, however, this has changed. The strong distinction between "science" and "humanities" has been criticized from many fronts and, at the same time, an increasing cooperation between the so-called "hard sciences" and "soft-sciences" is taking place in a wide range of scientific projects dealing with very complex and interdisciplinary topics.

In the last fifteen years the area of Soft Computing has also experienced a gradual rapprochement to disciplines in the Humanities and Social Sciences, and also in the field of Medicine, Biology and even the Arts, a phenomenon that did not occur much in the previous years (to the surprise of the very founder of the field, Lotfi Zadeh).

The collection of this book presents a generous sampling of the new and burgeoning field of Soft Computing in Humanities and Social Sciences, bringing together a wide array of authors and subject matters from different disciplines. Some of the contributors of the book belong to the scientific and technical areas of Soft Computing while others come from various fields in the humanities and social sciences such as Philosophy, History, Sociology or Economics.

The six sections in which the volume is divided represent some of the most relevant topics that have result from fruitful exchanges taken place on this topic in the last years in several workshops, seminars and special sessions. These are only an example of what the interesting encounter and conversations between Soft Computing and the Humanities and Social Sciences can yield in the future.

As this book will appear in 2011, it feels well to address some special dates and events that happened during the time we worked with the manuscripts that have been collected here. In the year 2009 Abe Mamdani left us unexpectedly and so Ladislaus Kohout passed away. In July 2010 Jaume Casasnovas also left us just a few weeks after he agreed to write a contribution to this book. In memory of him we include a dedication written by his colleague and friend Gaspar Mayor.

On the other hand, the publication of this book coincides with some happy events as well. In February 2011 Lotfi Zadeh became 90 years old and half a year before his theory of Fuzzy Sets and Systems became 45 years old. In addition, the general field of Soft Computing is approaching its age of majority as it has been alive for 20 years now. To all of these milestones we want to dedicate this book.

We want to thank the Foundation for the Advancement of Soft Computing, the Scientific Committee of the European Centre for Soft Computing (ECSC) in Mieres, Asturias (Spain) and, especially, to the General Director of the ECSC, Luis Magdalena, and the two emeritus researchers Claudio Moraga and Enric Trillas of the unit of "Fundamentals of Soft Computing" for their help in the development of this project.

We are also very grateful to Springer Verlag (Heidelberg) and in particular to Dr. Thomas Ditzinger for helping this edition find its way onto the publisher's list, and likewise to Janusz Kacprzyk (Warsaw), who accepted the book into the series *Studies in Fuzziness and Soft Computing*.

Finally, we would like to thank all the contributors for their enthusiastic participation in this book and for creating with us the path for the development of the promising field of Soft Computing in Humanities and Social Sciences.

June, 2011

Rudolf Seising
Veronica Sanz González
Mieres (Asturias), Spain and Berkeley, California, USA

Jaume Casasnovas
In Memoriam

Jaume Casasnovas was born in Palma (Mallorca, Spain) in 1951. He past away too soon, at the age of 59.

In 1973, he finished his B.S. degree in Mathematics at the University of Barcelona. He later received his doctorate in Computer Science, in 1989, from the University of the Balearic Islands (UIB).

In 1975, after two years working as an Assistant Professor at the University of Barcelona, he became a Secondary School teacher. He remained in this position until September 1980, when he took over as a Secondary School technical supervisor. In 1994, he won a position as Associate Professor at the University of the Balearic Islands. He remained in this position at the department of Mathematics and Computer Science at the UIB until he passed away on July 14th, 2010.

His interest in the teaching of Mathematics was what fuelled his participation in designing various projects such as Mathematics for Education, which is still part of the curriculum of the Master of Mathematics, the post-graduate studies of Mathematics and the teaching of Mathematics in Secondary Education in the UIB.

Jaume Casasnovas was without a doubt a role model in the world of Mathematics education in our community and his influence will be felt for a long time, especially among his university students to whom he was able to instil a big dose of enthusiasm and devotion for this subject.

Jaume was not only a great teacher but also a good researcher. In 1989, under the leadership of Professor Josep Miró, he finished his Ph.D. in Computer Science, with the thesis "Contribution to a formalization of the direct inference", in which he made a study of inference of approximate knowledge. This work manages concepts and results of areas such as approximate knowledge, multiple-valued logic, theories of possibility and need, etc.

Without a doubt, his relationship with Professor Miró was what turned Jaume's interest towards research in approximate knowledge. During the early eighties, thanks to the significant support of Nadal Batle, Llorenç Valverde, and Enric Trillas, who was responsible for the introduction of Fuzzy Logic in Spain, there was a growing interest in the study of this budding theory in Palma. Years later Gaspar Mayor was able to create the research group LOBFI at the UIB, whose main interest is the study of the mathematical aspects of Fuzzy Logic. Jaume was part of this group for several years. He also offered his knowledge to the research group BIOCOM (UIB) in the fields of Computational Biology and Bioinformatics. His contribution to these research groups has left a scientific and human imprint that will be remembered for a long time.

I would not wish to end without mentioning Jaume's personal side. The dictionary defines the word bonhomie as affability, plainness, kindness, honesty. I believe that Jaume Casasnovas has been an excellent example of this.

September 2010

Gaspar Mayor
Head of LOBFI research group

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