

Computer Recognition Systems

Advances in Soft Computing

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Computer Recognition Systems

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on Computer Recognition Systems CORES '05

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Preface

This book contains papers accepted for presentation at the 4th International Conference on Computer Recognition Systems CORES'05, May 22-25, 2005, Rydzyna Castle (Poland). This conference is a continuation of a series of conferences on similar topics (KOSYR) organized each second year, since 1999, by the Chair of Systems and Computer Networks, Wrocław University of Technology. An increasing interest to those conferences paid not only by home but also by foreign participants inspired the organizers to transform them into conferences of international range. Our expectations that the community of specialists in computer recognizing systems will find CORES'05 a proper form of maintaining the tradition of the former conferences have been confirmed by a large number of submitted papers. Alas, organizational constraints caused a necessity to narrow the acceptance criteria so that only 100 papers have been finally included into the conference program. The area covered by accepted papers is still very large and it shows how vivacious is scientific activity in the domain of computer recognition methods and systems. It contains various theoretical approaches to the recognition problem based on mathematical statistics, fuzzy sets, morphological methods, wavelets, syntactic methods, genetic algorithms, artificial neural networks, ontological models, etc. Most attention is still paid to visual objects recognition; however, acoustic, textual and other objects are also considered. Among application areas medical problems are in majority; recognition of faces, speech signals and textual information processing methods being also investigated. Some papers are also devoted to theoretical recognition problems. On behalf of the Program Committee of CORES'05 I would like to thank all Authors who submitted their papers to the conference, and to encourage all of them, in particular the young scientists, to participate in the next CORES conferences which, I hope, will be organized. We owe also deep thanks to the Reviewers of the papers for their generous work.

Wrocław, February 2005.

Juliusz L. Kulikowski

Preface

Dear Friends:

It is our honour and pleasure to welcome You to take a part in the 4th International Conference on Computer Recognition Systems - CORES'05, to be held from 22nd to 25th May, 2005 in Rydzyna Castle (Poland).

The CORES'05 Conference - endorsed by the International Association for Pattern Recognition - is organized by Chair of Systems and Computer Networks of Wroclaw University of Technology in co-operation with Association for Image Processing (Polish IAPR Member Society) and State School of Higher Vocational Education of Jan Amos Komenski in Leszno, under the auspices of President of Leszno Town Mr Tomasz Malepszy, Rector of Wroclaw University of Technology Prof. Tadeusz Luty and Deputy Chairman of Division IV (Technical Sciences) of Polish Academy of Sciences Prof. Adam Borkowski.

The first three editions of CORES conferences (1999, 2001, 2003) had the national character and - in our opinion - after 6 years has matured enough to become an international event.

The conference has attracted over 160 paper submissions. Each paper was reviewed by two independent and impartial referees and judged on clarity, significance and originality. From all submitted papers only 100 papers were accepted for presentation.

The conference proceedings published by Springer Verlag in the famous book series "Advances in Soft Computing", contain 5 invited papers and accepted regular papers, which were grouped into the following sessions: Features, learning and classifiers, Image processing and computer vision, Medical applications, Speech and text recognition, Fingerprint and face recognition, Various applications.

We would like to thank the members of the Conference Committees, invited speakers, the paper reviewers, the special events organizers, session chairmen, the authors who have contributed original research papers and all conference animators.

We are specially grateful to Prof. Janusz Kacprzyk, Editor-in-chief "Advances in Soft Computing" book series, for making the ASC available for the proceedings of CORES'05 and the whole editorial team for the time and effort they put into the publishing process.

Your participation is the key to the success of CORES'05. We hope that you will exchange and share yours knowledge and experience with colleagues from all over the world. To each participant we offer best wishes for a very productive event. We are confident that the conference will continue to grow both in terms of size and quality.

Be welcome and enjoy your stay in Rydzyna Castle!

Marek Kurzynski

Local Chairman of Program Committee
and Volume Editor

Michal Wozniak

Chairman of Organizing Committee
and Volume Editor

Wroclaw, February 2005

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