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# Pattern Recognition and Data Mining

Third International Conference on
Advances in Pattern Recognition, ICAPR 2005
Bath, UK, August 22-25, 2005
Proceedings, Part I

Volume Editors

Sameer Singh
Maneesha Singh
Loughborough University
Research School of Informatics
Loughborough LE11 3TU, UK
E-mail:{s.singh/m.singh}@lboro.ac.uk

Chid Apte
IBM Corporation
1133 Westchester Avenue, White Plains, New York 10604, USA
E-mail: apte@us.ibm.com

Petra Perner
Institute of Computer Vision and Applied Computer Sciences, IBaI
Körnerstr 10, 04107 Leipzig, Germany
E-mail: ibaiperner@aol.com

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# Preface

This LNCS volume contains the papers presented at the 3rd International Conference on Advances in Pattern Recognition (ICAPR 2005) organized in August, 2005 in the beautiful city of Bath, UK. The conference was first organized in November 1998 in Plymouth, UK and subsequently in March 2001 in Rio de Janeiro, Brazil. The conference encouraged papers that made significant theoretical and application-based contributions in pattern recognition. The emphasis was on an open exchange of ideas and shared learning. The papers submitted to ICAPR 2005 were thoroughly reviewed by up to three referees per paper and less than 40% of the submitted papers were accepted. The papers have been finally published as two volumes of LNCS and these are organized under the themes of Pattern Recognition and Data Mining (which included papers from the tracks on Pattern Recognition Methods, Knowledge and Learning, and Data Mining), and Pattern Recognition and Image Analysis (which included papers from the Applications track). From the conference technical programme point of view, the first volume contains papers on pattern recognition, data mining, signal processing and OCR/document analysis. The second volume contains papers from the Workshop on Pattern Recognition for Crime Prevention, Security and Surveillance, Biometrics, Image Processing and Medical Imaging.

ICAPR 2005 was run in parallel with the International Workshop on Pattern Recognition for Crime Prevention, Security and Surveillance that was organized on the 22nd of August, 2005. This workshop brought together a number of excellent papers that focussed on how pattern recognition techniques can be used to develop systems that help with crime prevention and detection. On the same day, a number of tutorials were also organized. Each tutorial focussed on a specific research area and gave an exhaustive overview of the scientific tools and state-of-the-art research in that area. The tutorials organized dealt with the topics of Computational Face Recognition (given by Dr. Babback Moghaddam, MERL, USA), 2-D and 3-D Level Set Applications for Medical Imagery (given by Dr. Jasjit Suri, Biomedical Technologies, USA; Dr. Gilson Antonio Giraldi, National Laboratory of Computer Science, Brazil; Prof. Sameer Singh, Loughborough University, UK; and Prof. Swamy Laxminarayan, Idaho State University, USA), Geometric Graphs for Instance-Based Learning (given by Prof. Godfried Toussaint, McGill University, Canada), and Dissimilarity Representations in Pattern Recognition (given by Prof. Bob Duin and Elzbieta Pekalska, Delft University of Technology, The Netherlands).

The conference also had three plenary speeches that were much appreciated by the audience. On the first day of the conference, Prof. David Hogg from the University of Leeds, UK gave an excellent speech on learning from objects and activities. On the second day of the conference Prof. Ingemar Cox from University College London, UK gave the second plenary speech. On the final

day of the conference Prof. John Oommen from Carlton University, Canada gave a plenary speech on the general problem of syntactic pattern recognition and string processing.

ICAPR was a fully reviewed and well-run conference. We would like to thank a number of people for their contribution to the review process, especially the Program Chairs, Tutorial Chair Dr. Majid Mirmehdi and Workshops Chair Prof. Marco Gori. The members of the Program Committee did an excellent job with reviewing most of the papers. Some papers were also reviewed by academics who were not in the committee and we thank them for their efforts. We would also like to thank the local arrangements committee and University of Bath Conference Office for their efforts in ensuring that the conference ran smoothly. In particular, our thanks are due to Dr. Maneesha Singh, Organizing Chair and Mr. Harish Bhaskar, Organizing Manager who both worked tirelessly. The conference was supported by the British Computer Society and a number of local companies within the UK. We would like to thank Springer in extending their support to publish the proceedings as LNCS volumes. Finally, we thank all the delegates who attended the conference and made it a success.

August 2005

Sameer Singh
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