Preface

This volume of LNCS contains all of the papers that were presented at the 2nd International Conference on Advances in Pattern Recognition held in Rio between the 11th and 14th of March, 2001. The conference was first organised in November 1998 in Plymouth UK as a platform to bring invited speakers to a key small scale meeting where ideas can be shared in a scientific environment. Philosophically, the conference encourages papers that focus on the *advances* in the field of pattern recognition. As such, the emphasis has been on open exchange of ideas. Paper presentation and discussion of technical issues is given more time and more focus using a single track for the conference. The conference encourages individuality and creativity in the scientific context with the aim of fostering new ideas that will lay the foundations of future scientific work in this area.

ICAPR'2001 has been organised to bring together key plenary speeches by leading researchers in pattern recognition. The plenary speakers include Prof. Ruspini from SRI, USA, Prof. Pentland from MIT Media Lab, USA, Prof. Bunke from University of Berne, Switzerland, Prof. Fukuda from Nagoya University, Japan and Prof. Vaclav Hlavac from Czech Technical University, Czech Republic. Detailed knowledge of specific domains is made available through the tutorial programme on the first day of the conference. The key themes under which the papers have been submitted and accepted include neural networks and evolutionary computation, character recognition and document analysis, feature selection, pattern recognition, and image/signal processing theory and applications.

ICAPR'2001 is a fully reviewed conference and as such we are thankful to a number of people for their contribution to the review process. Also, thanks are due to the local arrangements committee for making the conference possible in Rio. The support from the International Association of Pattern Recognition has been key to generating good publicity in the pattern recognition community. The conference is also supported by the British Computer Society. Our thanks are due to the International University in Germany, Tuiuti University of Parana, and VARIG who have financially helped make this conference a success. We would like to thank Springer-Verlag for continuing to support this conference series. Springer London printed the previous proceeding of the UK conference in 1998 as a book. We hope that Springer will continue to support this conference series in the future.

For any conference, its success is determined by the quality of publications it has and the longevity of the research papers that appear in its proceedings. We hope that this LNCS volume will meet these expectations. To make this possible, the authors and attendees of the conference can not be thanked enough.

Sameer Singh Nabeel Murshed Walter Kropatsch

March 2001

ICAPR '2001 - List of Referees

We would like to thank the following referees for their valuable reviews and comments on submitted papers.

Adnan Amin, University of New South Wales, Australia Horst Bischof, Technical University of Vienna, Austria Dibio Borges, Federal University of Goias, Brazil Guido Bugmann, University of Plymouth, U.K. Horst Bunke, Institut fur Informatik und angewandte Mathematik (IAM), Switzerland Andreas Dengel, German Research Centre for AI GmbH, Germany Evgenia Dimitriadou, Technical University of Vienna, Austria Nicolae Duta, Michigan State University, U.S.A. Nick Efford, University of Leeds, U.K. Richard Everson, University of Exeter, U.K. Michael Fairhurst, University of Kent, U.K. Luc Van Gool, Katholieke Universitat Leuven, Belgium Marco Gori, University of Siena, Italy John F. Haddon, Defence Evaluation and Research Agency, U.K. Gregory Hager, The Johns Hopkins University, U.S.A. Jean Michel Jolion. INSA. France Gareth Jones, University of Exeter, U.K. Joseph Kittler, University of Surrey, U.K. Ales Leonardis, University of Ljubljana, Slovenia Peter Meer, Rutgers University, U.S.A. Nabeel Murshed, Universidade Tuiuti do Parana, Brazil Ajit Narayanan, University of Exeter, U.K. Derek Partridge, University of Exeter, U.K. Maria Petrou, University of Surrey, U.K. Nalini Ratha, IBM Research, U.S.A. Sarunas Raudys, Institute of Mathematics and Informatics, Lithuania Nasser Sherkat, The Nottingham Trent University, U.K Sameer Singh, University of Exeter, U.K. Jasjit Suri, Marconi Medical System, Inc., U.S.A. Jayaram K. Udupa, Temple University, U.S.A. Zheng Yang, University of Exeter, U.K.

Tuiuti University of Paraná, Brazil VARIG – The Brazilian Airlines National Center for Information Management Development