Preface

This proceedings volume includes papers presented at DGCI 2003 in Naples, Italy, November 19–21, 2003. DGCI 2003 was the 11th conference in a series of international conferences on Discrete Geometry for Computer Imagery. The conference was organized by the Italian Institute for Philosophical Studies, Naples and the Institute of Cybernetics “E. Caianiello,” National Research Council of Italy, Pozzuoli (Naples). DGCI 2003 was sponsored by the International Association for Pattern Recognition (IAPR).

This is the second time the conference took place outside France. The number of researchers active in the field of discrete geometry and computer imagery is increasing. Both these factors contribute to the increased international recognition of the conference. The DGCI conferences attract more and more academic and research institutions in different countries. In fact, 68 papers were submitted to DGCI 2003. The contributions focus on discrete geometry and topology, surfaces and volumes, morphology, shape representation, and shape analysis. After careful reviewing by an international board of reviewers, 23 papers were selected for oral presentation and 26 for poster presentation. All contributions were scheduled in plenary sessions. In addition, the program was enriched by three lectures, presented by internationally well-known invited speakers: Isabelle Bloch (École Nationale Supérieure des Télécommunications, France), Longin Jan Latecki (Temple University, USA), and Ralph Kopperman (City College of New York, USA).

In 2002, a technical committee of the IAPR, TC18, was established with the intention to promote interactions and collaboration between researchers working on discrete geometry. The first TC18 meeting was planned to be held in conjunction with DGCI 2003, to allow the members to discuss the activity of the technical committee. The outcome from this meeting will help the ongoing research and communication for researchers active within the field during the 18 months between the conferences.

We hope that we made DGCI 2003 an unforgettable event where researchers gathered for fruitful discussions and enjoyable social activities, both categories providing stimuli for researchers.

Hereby, we would like to thank the contributors who responded to the call for papers in a very positive manner, the invited speakers, all reviewers and members of the steering, program, and local organizing committees, as well as DGCI participants. We are also grateful to Regione Campania for the financial help, indispensable to guarantee a successful conference.

September 2003

Ingela Nyström
Gabriella Sanniti di Baja
Stina Svensson
DGCI 2003 was organized by the Institute of Cybernetics “E. Caianiello” of the National Research Council of Italy and by the Italian Institute for Philosophical Studies. The conference venue was the Italian Institute for Philosophical Studies. The conference was sponsored by the International Association for Pattern Recognition (IAPR).

Conference Chairs

General Chair
Gabriella Sanniti di Baja
Institute of Cybernetics “E. Caianiello,” National Research Council of Italy, Pozzuoli (Naples), Italy

Program Chair
Stina Svensson
Centre for Image Analysis, Swedish University of Agricultural Sciences, Uppsala, Sweden

Publications Chair
Ingela Nyström
Centre for Image Analysis, Uppsala University, Uppsala, Sweden

Steering Committee

Gilles Bertrand France
Gunilla Borgefors Sweden
Achille Braquelaire France
Jean-Marc Chassery France
Annick Montanvert France
Gabor Szekely Switzerland
Program Committee

Eric Andrès France
Bidyut Baran Chaudhuri India
Michel Couprie France
Leila De Floriani Italy
Ulrich Eckhardt Germany
Bianca Falcidieno Italy
Christophe Fiorio France
Richard W. Hall USA
Atsushi Imiya Japan
Pieter Jonker The Netherlands
Ron Kimmel Israel
Nahum Kiryati Israel
Christer O. Kiselman Sweden
Reinhard Klette New Zealand
Walter Kropatsch Austria
Jacques-Olivier Lachaud France
Gregoire Malandain France
Rémy Malgouyres France
Serge Miguet France
Punam K. Saha USA
Pierre Soille Italy
Edouard Thiel France
Jayaram K. Udupa USA

Local Organizing Committee

Publicity Salvatore Piantedosi
Scientific Secretariat Silvia Rossi
Web Managers Luca Serino, Henrik Boström
Publications Ida-Maria Sintorn
Referees

Michal Aharon            Richard Hall            Jan Neumann
Eric Andres              Omer Heymann            Ingela Nyström
Mario Bertero            Atsushi Imiya            Francesca Odone
Gilles Bertrand          Pieter Jonker            Punam K. Saha
Ilya Blayvas             Ron Kimmel              Gabriella Sanniti di Baja
Gunilla Borgefors        Nahum Kiryati            Pierre Soille
Achille Braquelaire      Christoffer Kiselman     Stina Svensson
Alexander Bronstein      Reinhard Klette            Gabor Szekely
Michael Bronstein        Walter Kropatsch        Benjamin Tatton
Jasmine Burguet          Jacques-Olivier Lachaud    Edouard Thiel
Jean Marc Chassery       Pascal Lienhardt            Laure Tougue
Bidyut Baran Chaudhuri   Michael Lindenbaum        Jayaram K. Udupa
David Coeurjolly         Cris L. Luengo Hendriks   Avi Vardi
Michel Couprie           Gregoire Malandain            Anne Vialard
Leila De Floriani        Rémy Malgouyres              Ola Weistrand
Ulrich Eckhardt          Erik Melin                  Yaser Yacoob
Bianca Falcidieno        Serge Miguet
Fabien Feschet           Annick Montanvert
Christophe Fiorio        Dipti Prasad Mukherjee