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Computer Vision Approaches to Medical Image Analysis

Second International ECCV Workshop,
CVAMIA 2006
Graz, Austria, May 12, 2006
Revised Papers

Volume Editors

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Preface

Medical imaging and medical image analysis are developing rapidly. While medical imaging has already become a standard of modern medical care, medical image analysis is still mostly performed visually and qualitatively. The ever-increasing volume of acquired data makes it impossible to utilize them in full. Equally important, the visual approaches to medical image analysis are known to suffer from a lack of reproducibility. A significant research effort is devoted to developing algorithms for processing the wealth of data available and extracting the relevant information in a computerized and quantitative fashion.

Medical imaging and image analysis are interdisciplinary areas combining electrical, computer, and biomedical engineering; computer science; mathematics; physics; statistics; biology; medicine; and other fields. Medical imaging and computer vision, interestingly enough, have developed and continue developing somewhat independently. Nevertheless, bringing them together promises to benefit both of these fields.

This was the second time that a satellite workshop, solely devoted to medical image analysis issues, was held in conjunction with the European Conference on Computer Vision (ECCV), and we are optimistic that this will become a tradition at ECCV. We received 38 full-length paper submissions to the second Computer Vision Approaches to Medical Image Analysis (CVAMIA) Workshop, out of which 10 were accepted for oral and 11 for poster presentation after a rigorous peer-review process. In addition, the workshop included three invited talks. The first was given by Maryellen Giger from the University of Chicago, USA — titled “Multi-Modality Breast CADx”. The second invited talk dealt with “Quantification of Growth and Motion Using Non-Rigid Registration” and was presented by Daniel Rueckert, Imperial College London, UK. The third invited talk was entitled “Trends and Challenges in Medical Image Analysis” and was presented by Ravikanth Malladi, GE Global Research, India.

The workshop logistics were handled by the organizers of ECCV 2006, associated with the Institute of Electrical Measurement and Measurement Signal Processing of Graz University of Technology, the Institute for Computer Graphics and Vision of Graz University of Technology, and the Visual Cognitive Systems Laboratory at the University of Ljubljana. We thank all members of these institutions who were involved in the organization of the workshop for their support. We are grateful to the Styrian Government for the generous financial support of the CVAMIA 2006 Workshop. Finally, we extend our sincere thanks to the Program Committee members and to everyone else who made this workshop possible.

May 2006

Reinhard R. Beichel
Milan Sonka

Organization

The 2006 Computer Vision Approaches to Medical Image Analysis (CVAMIA) Workshop was held in conjunction with the 9th European Conference on Computer Vision (ECCV) in Graz, Austria, on May 12, 2006. The ECCV conference was organized by the Institute of Electrical Measurement and Measurement Signal Processing and the Institute for Computer Graphics and Vision, both located at the Graz University of Technology, and the Visual Cognitive Systems Laboratory at the University of Ljubljana.

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