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Abdominal Imaging

Computational and Clinical Applications

4th International Workshop
Held in Conjunction with MICCAI 2012
Nice, France, October 1, 2012
Proceedings



Springer

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Preface

The Fourth International Workshop on Computational and Clinical Applications in Abdominal Imaging was held in conjunction with the 15th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI) on October 1, 2012, in Nice, France.

In the abdomen, organs and disease appearance are complex and subtle, and thus the development of computational models that are useful in clinical practice is highly challenging. Nevertheless, diagnosis often relies on the quantitative measures of organs and lesions, because their volumes and shapes are strong indicators of disorders. Given the complexity and high variability of abdominal organs, the identification of distinct computational challenges for integrative models of organs and abnormalities is essential for understanding anatomy and disease, evaluating treatment, and planning intervention.

Leveraging the success of the previous workshops, the fourth MICCAI workshop on computational abdominal imaging aimed to provide a comprehensive forum for reviewing clinical opportunities in computational abdominal imaging, and for sharing state-of-the-art as well as emerging techniques for solving computationally challenging image analysis and visualization problems, by bringing together leading researchers and clinician-scientists from around the world.

In response to a call for papers, a total of 37 papers were initially submitted to the workshop. These papers underwent a rigorous, double-blind peer-review process, with each paper being reviewed by a minimum of 2, and in most cases, by 3 expert reviewers from the Scientific Review Committee. Based on the results of this review, 31 papers were accepted by the workshop. All of the accepted papers were revised by incorporating the reviewers' comments and re-submitted by the authors to be included in this proceedings volume.

The workshop provided participants with in-depth and interactive discussions on the emerging techniques introduced by the current clinical challenges that were not fully explored in the MICCAI main conference. The workshop successfully provided a forum among participants for the dissemination of state-of-the-art research and technologies, the exchange of emerging ideas, the initiation of collaborations, and the exploration of new clinical applications for diagnostic and interventional procedures in abdominal imaging.

We would like to express our sincere appreciation to the authors whose contributions to this proceedings book have required considerable commitment of time and effort. We also thank the members of the Scientific Review Committee for their excellent work in reviewing the submitted manuscripts on a tight schedule.

October 2012

Hiroyuki Yoshida
David Hawkes
Michael Vannier

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