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Biomedical Simulation

4th International Symposium, ISBMS 2008
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Proceedings

Volume Editors

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Preface

This book contains the written contributions to the 4th International Symposium on Biomedical Simulation (ISBMS), which was held at Imperial College in London, UK, July 7–8, 2008.

The manuscripts are organized in four different sections corresponding to key areas and techniques of this constantly expanding field: finite element modeling, mass spring and statistical shape modeling, motion and fluid modeling and implementation issues. An additional section covers the posters presented at the meeting.

Recent years have seen increased interest in computational models for biomedical simulation. The symposium provided an international forum for researchers in this area to share their latest work and to discuss future trends. It was held in the spirit and continuation of the symposia on Surgical Simulation and Soft Tissue Modeling (IS4TM) organized in 2003 by INRIA, Medical Simulation (ISMS) in 2004 by CIMIT and Biomedical Simulation (ISBMS) in 2006 by ETH.

The meeting was single track with 19 oral presentations and 7 posters selected after evaluation by at least three members of the Program Committee. In addition to contributed papers, the symposium included discussion panels on meshless methods and GPU-based simulation that gave participants an opportunity to learn the principles, applications, implementation details, and discuss future developments in these increasingly relevant areas. Denis Noble and Guang-Zhong Yang gave keynote talks on their work in computational modeling of biological systems and image-constrained biomechanical modeling, respectively.

The geographical breakdown of the different institutions presenting their research was: Australia, Canada, Denmark, France, Germany, Spain, Switzerland and UK. The quality and breadth of the contributions indicate that the symposium continues to be an important forum for our rapidly growing field, bringing together several related disciplines.

We would like to thank the Program Committee members for volunteering their time to review and discuss symposium papers and doing so in a timely and professional manner. We are also thankful to the Steering Committee for their encouragement and support to continue the tradition laid by the previous meetings in Juan-Les-Pins, Cambridge MA and Zurich. Special thanks go to the Local Organizing Committee for their hard work in making ISBMS 2008 a successful event. Last but not least, we would like to thank all authors for presenting their work at the symposium. It was a pleasure hosting ISBMS 2008 and we hope that all participants enjoyed the intense and stimulating symposium.

July 2008

Fernando Bello
P.J. “Eddie” Edwards

Organization

The Fourth International Symposium on Biomedical Simulation ISBMS 2008 was organized by the departments of Biosurgery and Surgical Technology and Computing of Imperial College London.

ISBMS 2008 would not have been possible without the dedication of the Local Organizing Committee: Harry Brenton, Aakanksha Chhikara, Vincent Luboz, and Pierre-Frédéric Villard.

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