

Medical Imaging 2011

Visualization, Image-Guided Procedures, and Modeling

Kenneth H. Wong
David R. Holmes III
Editors

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Introduction

Welcome to the 2011 edition of the SPIE Visualization, Image-Guided Procedures, and Modeling (VIGPM) conference proceedings. The conference continues to be a premier venue for our field, small enough to be highly collegial yet still showcasing the latest technical advances. The conference is an ideal setting for students to gain an understanding of the research community and interact with both peers and mentors. This year we received approximately 140 abstract submissions and accepted approximately 120. The number and quality of submissions has remained consistent despite many changes in the research and funding environment, which is very encouraging for our field.

Our conference is truly an interdisciplinary one, and our thematic areas are squarely at the interface of the clinical and technical worlds. Thus, we were fortunate this year to welcome Dr. S. Duke Herrell, Associate Professor of Urology and Director of Robotic Surgery at Vanderbilt University Medical Center, as our keynote speaker. Dr. Herrell provided an outstanding overview of the state of the art in minimally invasive interventions. He outlined the elements for successful collaborations between engineers and physicians and provided concrete examples of how such collaborations are changing the way that surgery is practiced. He also challenged our conference to develop new methods that would provide even greater guidance, safety, and clinical efficacy.

This year we continued the tradition of holding a combined session with the Ultrasonic Imaging, Tomography, and Therapy conference. There are numerous scientific areas where our two conferences overlap, and thus the joint session is an excellent opportunity for the two groups to learn from each other and from the keynote speaker. This year's Ultrasonics keynote was provided by Dr. Terry M. Peters, a scientist at the Robarts Research Institute (London, ON) and professor of medical imaging and medical biophysics at the University of Western Ontario. Dr. Peters' research in cardiac ultrasound has made an enormous impact on the field, and numerous students and postdocs have benefited from his guidance and mentorship. His keynote talk continued the theme that advanced guidance has led to dramatic changes in how cardiac procedures can be done, enabling safer and better therapies. New capabilities for intra-operative imaging, in conjunction with precise pre-operative imaging and instrument tracking, will continue to foster these positive changes.

We are truly grateful to all our committee members for their help in reviewing abstracts, evaluating student papers, and judging posters. We can always rely on their speedy and conscientious advice. Their steadfast dedication to the work of the committee makes our job much more pleasant.

It would be impossible to run this conference without the outstanding support of the SPIE staff members, including the office staff, management, and editors. They make our job easier, ensure that deadlines are met, and allow us to focus on the technical content.

Finally, we would like to thank all the attendees who come to give talks, present posters, and actively participate in the meeting. We look forward to seeing you next year in San Diego and for many years to come!

Kenneth H. Wong
David R. Holmes III