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Visualization in Biomedical Computing

4th International Conference, VBC '96
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Proceedings

With 18 Color Pages
and Numerous Halftones

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Preface

This book represents the proceedings of the Fourth International Conference on *Visualization in Biomedical Computing*. Following the Georgia Institute of Technology, the University of North Carolina and the Mayo Institutions, it took place at the University of Hamburg, Germany. As in previous meetings its goal was to promote the science of computer based visualization of biomedical information, especially of the human body. An interdisciplinary international group of scientists, engineers, and clinicians gathered in order to present and discuss the state of the art concerning algorithms, the rapidly increasing number of applications, and practical problems of system design.

The increasing interest in the field of biomedical visualization was manifested by 232 paper submissions from which only 73 could be selected in a peer review process as oral or poster presentations. While this fact was disappointing for many applicants with good papers, the high degree of selection certainly led to a high quality book. It reflects the recent achievements and also the current problems in the field of computer based visualization in medicine and biology. Substantial improvements in rendering techniques and multi-modality imaging have occurred. The critical field of automated image segmentation has seen significant progress as well. Concerning applications we observe a shift from pure visualization to therapeutic interventions using visualization tools. Not surprisingly, the brain is the most popular organ for development of tools and applications, since it is certainly the most complex organ and relatively easy to image.

A book like this one is, of course, not possible without the help of many people. First of all we have to thank the members of the program committee for their hard work. With three reviewers per paper most of them had to review more than 25 papers! We are especially grateful to Professor Siegfried Stiehl who helped us in solving all kinds of unexpected problems. The financial risk of the meeting was minimized by generous support of the German Reseach Council (DFG). The Institute of Electrical and Electronics Engineers (IEEE), the German Society of Computer Science (GI), and the German Society of Medical Informatics, Biometrics, and Epidemiology (GMDS) helped us in advertising the conference.

Last but not least we want to thank the conference coordinators Bernhard Pflesser, Thomas Schiemann, and Rainer Schubert, and the staff of the Department of Computer Science in Medicine for their excellent work in organizing the entire conference.

Hamburg and Boston, July 1996

Karl Heinz Höhne Ron Kikinis

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