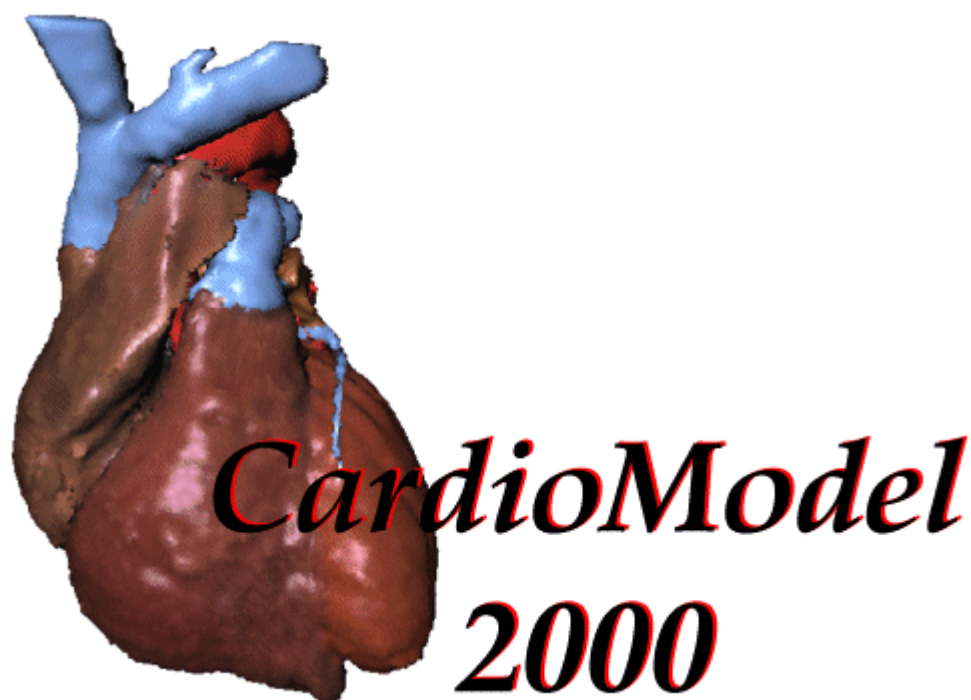




◀ [Home](#) [Current Issue](#) [Table of Contents](#) ▶
[Authors](#) [Keywords](#)



Computer Models of the Heart: Theory and Clinical Application

Preface

The theory and the applications of the computerized modelling of the heart were the topics of the workshop **CardioModel 2000** which was held at the University of Karlsruhe in September 14-15, 2000. The workshop aimed at the exchange of knowledge between engineers, computer scientists, cardiologists and heart surgeons. In the last few years the modelling of the human heart using computer technologies received numerous impetus eg from molecular biology, cell physiology, medical imaging, biomechanics and numerical mathematics. In the workshop resulting, current and future techniques were presented and discussed in their interrelation between established and potential applications.

Workshop topics

- Anatomical modelling of heart
- Modelling of cardiac electrical excitation
- Numerical calculation of electrocardiograms and body surface potential maps
- Coupling of electrical excitation and mechanical contraction
- Fluid mechanics and biomechanical modelling of myocardium
- Imaging of cardiac electrical sources
- Modelling of the neuronal and hormonal cardiac control processes
- Parametrization and optimization of therapeutic methods: defibrillation, pacing, ablation
- Techniques of morphological and functional imaging

Meeting Chairmen

Frank B. Sachse, Ph.D., University of Karlsruhe, Germany

Olaf Dössel, Prof., University of Karlsruhe, Germany

Organizing Committee

Ingo H. de Boer, Dipl.-Ing., University of Karlsruhe, Germany

Rotraut Frech, MTA, University of Karlsruhe, Germany

Irene Günter, University of Karlsruhe, Germany

Christian Werner, Dipl.-Ing., University of Karlsruhe, Germany

Scientific Committee

Wolfgang Bauer, Ph.D., University Hospital of Würzburg, Germany

Piero Colli-Franzone, Prof., University of Pavia, Italy

Rüdiger Dillmann, Prof., University of Karlsruhe, Germany

Jean-Guy Fontaine, Prof., ENSI de Bourges, France

Axel Haase, Prof., University of Würzburg, Germany

Jens Haueisen, Ph.D., Friedrich Schiller University, Germany

Arun V. Holden, Prof., University of Leeds, UK

Willy Kalender, Prof., University of Erlangen-Nürnberg, Germany

Erwin Keeve, Ph.D., Center of Advanced European Studies and Research, Bonn, Germany

Jaakko Malmivuo, Prof., Ragnar Granit Institute, Finland

Karsten Meyer-Waarden, Prof., University of Karlsruhe, Germany

Jukka Nenonen, Ph.D., Helsinki University of Technology, Finland

Adriaan van Oosterom, Prof., University of Nijmegen, Netherlands

David Paterson, Prof., University of Oxford, UK

Bernhard Tilg, Prof., Graz University of Technology, Austria

Nathalie Virag, Ph.D., Medtronic, Switzerland

