

Theme 4

16

Image Processing, Biosignal Processing, Modelling and Simulation, Biomechanics



Theme Chairs:

Heinz Handels,
University Medical
Center Hamburg-
Eppendorf,
Germany

Ron Kikinis,
Brigham & Women's
Hospital, Boston,
USA

ABSTRACT:

Theme 4 focuses on new methods and algorithms as well as recent developments and applications in the field of medical image computing. A variety of algorithmic, engineering and biomedical research topics will be covered. One of the areas is the development of models to improve image and signal processing techniques as well as the use of models for the simulation of dynamic processes in virtual bodies. Another topic is the combination of advanced image analysis and virtual reality systems for application in diagnostics, therapeutical applications and for education and training. A final area of interest to this track are modelling and simulation techniques in biomechanics and in the cardiovascular system.

The activities in theme 4 are intended as a forum for interdisciplinary exchanges among scientists, engineers and medical doctors. New diagnostic and therapeutic perspectives in this emerging field will be discussed to improve patient treatment in the future.

17

TRACKS:

Image Analysis and Visual Computing

Track Chairs:

Thorsten Buzug,
University of Lübeck,
Germany

Carl-Fredrik Westin,
Harvard Medical School,
Boston, USA

Image Segmentation and Registration

Track Chairs:

Til Aach,
RWTH Aachen University,
Germany

Xavier Pennec,
Institut National de Re-
cherche en Informatique et
Automatique,
Sophia Antipolis, France

Virtual Reality in Medicine

Track Chairs:

Nassir Navab,
Technical University
Munich, Germany

Myong-Hee Kim,
Ewha Womans University,
Seoul, Korea

Biosignal Processing

Track Chairs:

Hartmut Dickhaus,
University of Heidelberg,
Germany

Luca Mainardi,
Politecnico di Milano, Italy

Modeling and Simulation

Track Chairs:

Heinz-Otto Peitgen,
University of Bremen,
Germany

Garbor Szekely,
ETH Zurich, Switzerland

Computational Biology & Physiome

Track Chairs:

Nic Smith,
Oxford University, UK

Martyn Nash,
University of
Auckland, New Zealand

Biomechanics

Track Chairs:

Klaus Radermacher,
RWTH Aachen University,
Germany

Edoardo Mazza,
ETH Zurich, Switzerland

Flow in the Cardiovascular System

Track Chairs:

Dieter Liepsch,
University of Applied
Sciences HAW,
Munich, Germany

Hermann Berger,
Technical University
Munich, Germany

Modeling and Analysis of the Cardiovascular System

Track Chairs:

Boudewijn Lelieveldt,
Leiden University Medical
Center, Netherlands

Gunnar Seemann,
University of
Karlsruhe (TH), Germany