



IEEE International Symposium on Biomedical Imaging: Macro to Nano

7-10 July 2002

Washington, DC, USA



Symposium Co-Chairs

Michael Unser

EPFL, Switzerland

Zhi-Pei Liang

University of Illinois, USA

Technical Program Chairs

Michael Vannier

University of Iowa, USA

Jeffrey Fessler

University of Michigan, USA

Grants & Technical Support by

National Institutes of Health

*National Institute for Biomedical Imaging
and Bioengineering*

NIH Advisors & Coordinators

Daniel Sullivan, NCI

Richard Swaja, NIBIB

Special Sessions

Jean-Louis Coatrieux, France

Erik Meijering, Switzerland

Program Committee

Akram Aldroubi, USA

Nicholas Ayache, France

Peter Basser, USA

Michael Brady, Great Britain

Yoram Bresler, USA

Thomas Budinger, USA

Gary Christensen, USA

Laurence Clark, USA

James Duncan, USA

Aaron Fenster, Canada

Joachim Frank, USA

Scott Fraser, USA

Gary Glover, USA

James Greenleaf, USA

Karl Heinz Hobbe, Germany

Ron Kikinis, USA

Frithjof Kruggel, Germany

Andrew Laine, USA

Frank Natterer, Germany

Michael Phelps, USA

Stephen Pizer, USA

Jerry Prince, USA

Richard Robb, USA

Christian Roux, France

Steven Schreiner, USA

Milan Sonka, USA

Lawrence Staib, USA

Gabor Szekely, Switzerland

Russell Taylor, USA

Paul Thompson, USA

Benjamin Tsui, USA

Max Viergever, The Netherlands

David Wilson, USA

Keith Worsley, Canada

Symposium Management

Mercy Kowalczyk

IEEE Signal Processing Society

Laura J. Wolf

IEEE Engineering in Medicine and Biology Society

ANNOUNCEMENT & CALL FOR PAPERS

Technological advances in biomedical imaging are providing unprecedented opportunities for improving our understanding of biological processes and revealing the anatomical and functional organization of biological systems from macro- to nanoscale. Research in this area is progressing at an extraordinary rate and is becoming more and more interdisciplinary. The **IEEE Engineering in Medicine and Biology Society (EMB-S)** and the **IEEE Signal Processing Society (SP-S)** have joined forces with the **NIH National Institute for Biomedical Imaging and Bioengineering (NIBIB)** to bring together, through this new symposium, researchers and practitioners with different backgrounds – but with a common interest in biological and medical imaging – to share their knowledge and address the latest challenges in data acquisition, image reconstruction, image processing, analysis, and visualization. Fostering interaction and cross-fertilization, this event will contribute to a fully integrated approach to biomedical imaging through all scales of observation.

Topics for manuscript submission include, but are not limited to:

★ Image Modalities

- ♦ Magnetic resonance imaging
- ♦ Computed tomography (transmission, emission)
- ♦ Positron emission tomography
- ♦ X-ray imaging
- ♦ Ultrasound
- ♦ Optical microscopy (confocal, multi-photon, fluorescence)
- ♦ Optical coherence imaging
- ♦ Electron microscopy
- ♦ Micro-scanners
- ♦ Spectroscopy

★ Image Processing, Analysis, Visualization

- ♦ Quantitative image analysis
- ♦ Image registration
- ♦ Image enhancement and segmentation
- ♦ Visualization
- ♦ Deformable models, anatomical atlases
- ♦ Time series and motion analysis
- ♦ Image compression, database management

★ Applications in Medicine and Biology

- ♦ Micro-arrays
- ♦ Molecular imaging
- ♦ Cellular imaging
- ♦ Medical imaging
- ♦ Functional imaging (metabolism, flow, neuro-transmission)
- ♦ Image-guided surgery and navigation

★ Image Reconstruction, Inverse Problems

- ♦ 2D and 3D reconstruction
- ♦ Mathematical imaging
- ♦ Sampling and interpolation
- ♦ Deconvolution, image restoration
- ♦ Statistical, variational approaches

Symposium Features

- ★ Plenary talks by pioneers and leaders in biomedical imaging
- ★ Special sessions
- ★ Regular oral and poster presentations
- ★ Industrial exhibitions

Important Dates:

Paper Submission Deadline	1 February 2002	Advance Registration Deadline	15 May 2002
Notification of Acceptance	30 April 2002	Final Program Announced	1 June 2002

Please visit the web site for paper submission procedures and further details about the symposium: <http://www.biomedicalimaging.org>

E-mail: isbi2002@ieee.org