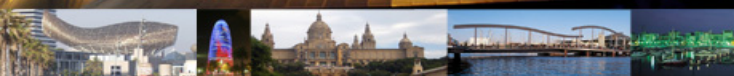
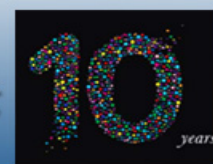


CALL FOR ABSTRACTS

ISBI 2012

2 - 5 MAY · Barcelona · Spain



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The IEEE International Symposium on Biomedical Imaging (ISBI) is the premier forum for the presentation of technological advances in theoretical and applied biomedical imaging and image computing. ISBI is a joint initiative from the IEEE Signal Processing Society (SPS) and the IEEE Engineering in Medicine and Biology Society (EMBS) and ISBI 2012 will be the ninth meeting in this series and its 10th anniversary since the first edition.

Aims and scope of abstracts track in ISBI

The goal of this new track is to open up ISBI to a broader audience of imaging scientists (in particular from the biology and physics community) and to encourage cross-fertilization. Its scope is complementary to the regular track with the dual aim of: (a) stimulating future algorithmic, mathematical, and computational contributions by the traditional ISBI community, and (b) promoting the transfer of advanced algorithms to the practice of bio-imaging. Only short abstract submissions will be considered and accepted submissions will be presented as posters at the meeting, but will be neither published in the conference proceedings nor in IEEE Xplore.

Particular topics of interest for this track include: Recent developments/advances of optical, MRI, or other imaging instrumentation, imaging protocols, or biochemical tools as well as recent biological/clinical findings obtained primarily via the use of existing imaging algorithms or software tools. The Abstract Track is particularly suited for papers that discuss the role of signal and image processing approaches in applications.

Important dates

Deadline for submission: **January 6, 2012**

Conference dates: **May 2-5, 2012**

Why should you submit an abstract to ISBI?

If you are a basic biological, biomedical or clinical researcher; if your work requires access of advanced biological or biomedical imaging techniques; or if you are keen to network with experts in the image analysis domain... then perhaps you should consider submitting an abstract to ISBI 2012. You will have the unique opportunity to meet physicists and engineering experts in image acquisition and image processing; to attend a variety of tutorials and special sessions reviewing hot topics in amenable and high-quality lectures. Why not to make the most out of this conference by drafting an abstract to ISBI where you report on your recent work and expose the challenges of your application to the biomedical imaging community? Learn from other disciplines, listen to top notch plenaries and semi-plenaries, share your imaging challenges, and establish new collaborations in a vibrant city.

Further information is available at
<http://www.biomedicalimaging.org/>

ISBI 2012 Program Highlights

Plenary Lectures

- **Pushing the Envelope in Biological Imaging.** E. Betzig, Howard Hughes Medical Institute.
- **Photoacoustic Tomography: Ultrasonically Breaking through the Optical Diffusion Limit.** L.V. Wang: Washington University.
- **The broad range of Raman-based spectral imaging for biomedical analytics.** J. Popp, Friedrich-Schiller University Jena.
- **Compressive Sensing for Faster Imaging.** E. Candes, Stanford University.

Special Focus Lectures

- **Single-Molecule Active Control Microscopy Illuminates Cells Beyond the Diffraction Limit,** W.E. Moerner, Stanford University.
- **Tracking of Cellular Dynamics,** J.C. Olivo-Marin, Institut Pasteur.
- **X-ray Tomography of Biological Material: Bridging a resolution gap,** J.L. Carrascosa, Spanish National Center of Biotechnology.

Special Sessions

- **Cellular Tomography: R. Schroeder;** C.O. Sanchez Sorzano; S. Scheres
- **Quantitative Aspects of Single Molecule Microscopy:** S. Ram, K. Lidke, R. Piestun, J. Enderlein, H. Yang, M. Foreman
- **Sparse Methods for Signal Reconstruction and Medical Image Analysis:** L. Axel, D. Metaxas
- **Fetal and Neonatal Imaging:** S. Rueda, A. Noble, A. Papageorghiou
- **Quantitative Image Analysis Methods for Clinical Trials and Population Studies:** S. Ourselin, D. Cash
- **Image-Based Physiological/Biological Modeling and Simulation:** D. Brooks, A.F. Frangi
- **Image-Based Computational Cardiac Physiology:** R. Sebastián, M. Sermesant, L. Wang

Biomedical Image Analysis Challenges

- **Particle Tracking,** J.-C. Olivo-Marin, E. Meijering
- **Segmentation of neuronal structures in EM stacks,** I. Arranda-Carreras, S. Seung, A. Cardona, J. Schindelin
- **VESSEL SEgmentation in the Lung 2012 (VESSEL12),** B. van Ginneken, R.D. Rudyanto, E. van Rikxoort, S. Kerkstra
- **Cardiac Delayed-Enhancement Magnetic Resonance Image Segmentation (cDEMRES),** K. Rhode, R. Karim, R. MacLeod, J. Cates, D. Peters
- **High angular resolution diffusion imaging,** Y. Wiaux, A. Daducci, J-P Thiran
- **Challenge US: Biometric measurements from fetal ultrasound images,** S. Rueda, A. Noble, A. Papageorghiou

Satellite Open Source Workshops (organized by EuroBioimaging)

- **Bioimage Analysis Workshop,** M. Unser, A. Muñoz-Barrutia, A. Jahnen, D. Sage
- **Medical Image Analysis Workshop,** M. Modat, W.J. Niessen

Student Activities

- Meet the Editors-in-Chief
- Lunch with the Leaders
- Student Networking Luncheon
- Student Paper Awards