



Scientific Session I: Intra-Operative Surgical Planning
Location: Mayer Auditorium/Keith Administration Building

8:00 - 8:10 AM
Babak Kateb

Chairman and Organizer of the Symposium
Director of NASA/JPL-Caltech-USC Brain Mapping Project
Title: Welcome & Program Review



8:10-8:30 AM

Steven Giannotta, M.D.
Chairman of USC Neurosurgery Department
Title: Introduction and Opening Remarks

8:30-8:50 AM

Brian Henderson, M.D.
Dean of Keck School of Medicine
Title: About Keck & Its Future

8:50-9:10 AM

Ferenc A. Jolesz, M.D.
B. Leonard Holman Professor of Radiology, Vice Chairman for Research, Director of Division of MRI and Image Guided Therapy Program Department of Radiology, Brigham and Women's Hospital, Harvard Medical School
Title: MRI-Guided Neurosurgery



9:10-9:30 AM

Henry Hirschberg, M.D., Ph.D.
Professor of Neurosurgery/Visiting scientist Department of Neurosurgery, Rikshospital Oslo Norway, BLI/UCI
Title: Impact of Intra-Operative MRI on the Surgical Results for High Grade Glioma

9:30-9:45 AM

Questions and Answers with the Panel

9:45-10:00 AM

Coffee Break

Scientific Session II: Functional Neuroimaging
Location: Mayer Auditorium/Keith Administration Building

10:00 - 10:20 AM

Manbir Singh, Ph.D.
Professor of Radiology and Bio-Medical Engineering at USC
Title: Mapping Brain Connections by DTI Tractography

10:20 - 10:40 AM

Jean-Jacques Lemaire MD, PhD
University Hospital of Clermont-Ferrand
Professor of Neurosurgery at Auvergne University, ERIM-EA3295/INSERM, France
Title: Brain Mapping in Stereotactic Neurosurgery: Targeting (Pre and Per-operative) and Post Operative Control

10:40 - 11:00 AM

Richard M. Leahy, Ph.D.
Professor Signal and Image Processing Institute
Department of Electrical Engineering at USC
Title: Dynamic Imaging of Human Brain Function with Magnetoencephalography

11:00 - 11:20 AM

Michael Levene, Ph.D.
Assistant Professor of Biomedical Engineering at Yale
Title: Micro-Optical Probes for Multiphoton Fluorescence Microscopy of Deep Brain Structures

11:20 - 11:40 AM

Behnam Badie, M.D., F.A.C.S.
Associate Professor,
Vice Chair, Academic Affairs & Director of Comprehensive Brain Tumor Program
Department of Neurological Surgery, K3/805 Clinical Science Center
University of Wisconsin Hospital and Clinics Madison
Title: Imaging of Intracranial Gliomas Using NM404, A New Tumor Selective Phospholipid Ether Analog

11:40 - 11:55 AM

Question and Answers with the Panel



11:55 AM - 12:30 PM
Break for Lunch

Scientific Session III: NeuroImaging and Advanced Technology
Location: Zilkha Neurogenetic Institute

12:30 - 12:50 PM
Joy Hirsch, Ph.D.

Professor and Director fMRI Research Center
Departments of Radiology and Psychology
Center for Neurobiology and Behavior
Columbia University, Neurological Institute
Title: Brain Mapping for a Single Patient Where There is Zero Tolerance for Error

12:50 - 1:10 PM
Rasmus Birn, Ph.D.

Staff Scientist
Unit on Functional Imaging Methods
Laboratory of Brain and Cognition
National Institute of Mental Health, NIH
Title: Functional MRI: Challenges for Clinical Applications

1:10 - 1:30 PM

Sarath Gunapala, Ph.D.
Head of Infrared Array in NASA/JPL-Caltech-USC Brain Mapping Project
Visiting Research Professor of Neurological Surgery at Keck,
Senior Scientist and Supervisor of Infrared Array at NASA/JPL
Title: Multi-Band High Resolution Thermal Imaging

1:30 - 1:50 PM

Shouleh Nikzad, Ph.D.
Head of UV Array and Nanoscience in NASA/JPL-Caltech-USC Brain Mapping Project
Visiting Associate Research Professor of Neurosurgery at Keck,
Supervisor of Nanoscience and UV Array at NASA/JPL
Title: High Resolution, High Sensitivity Ultraviolet Imaging and Applications

1:50 - 2:10 PM

Alexandra Golby, M.D.
Clinical Instructor,
Department of Neurosurgery at Harvard
Title: Multi-Modality Brain Mapping for Surgical Planning: Putting it all Together

2:10 - 2:25 PM

Questions and Answers with the Panel

2:25 - 2:40 PM

Coffee Break

Scientific Session IV: NeuroImaging and Advanced Technology
Location: Zilkha Neurogenetic Institute

2:40 - 3:00 PM

Thomas George, Ph.D.
Head of MEMS/NEMS in NASA/JPL-Caltech-USC Brain Mapping Project
Visiting Associate Research Professor of Neurosurgery at Keck
Supervisor of MEMS and NEMS at NASA/JPL
Title: Micro and Nano-Electrode Mechanical Systems and its Medical Application

3:20 - 3:40 PM

Stephan G. Erberich, Ph.D.
Director Functional Imaging and Biomedical Informatics
Assistant Professor Radiology and Biomedical Engineering
University of Southern California
Department of Radiology, Childrens Hospital Los Angeles
Title: Neuroimaging of Function and Structure in the Immature Brain: Applications in Neonates and Infants

3:40 - 4:00 PM

Allan Wu, M.D.
Assistant Professor of Neurology at USC Keck School of Medicine
Title: Transcranial Magnetic Stimulation

4:00 - 4:20 PM

Wolfgang Fink, Ph.D.
Co-Director of NASA/JPL-Caltech-USC Brain Mapping Project
Visiting Research Assistant Professor of Neurosurgery at Keck
Title: Revolutionary Real-Time Image Processing and Analysis





4:20 - 4:40 PM
 Viterio Cristini, Ph.D.
 Professor of Math at UCI
 Title: Nonlinear Simulation of Tumor Necrosis, Neo-Vascularization and Tissue Invasion via an Adaptive Finite-Element/Level Set Method

4:40 - 4:55 PM
 Questions and Answers with the Panel

4:55 - 5:10 PM
 Coffee Break

Scientific Session V: NeuroImaging and Advanced Technology and Closing Remarks
 Location: Zilkha Neurogenetic Institute



5:10 - 5:30 PM
 Andy Obenaus, Ph.D.
 Non-Invasive Imaging Laboratory,
 Radiobiology Program, Loma Linda University
 Title: Multimodal Neuroimaging of Human Pathology in Animal Models

5:30 - 5:50PM
 Elaine L. Bearer, M.D., Ph.D.
 Associate Professor of Medical Science at Brown University School of Medicine and
 Moore Distinguished Scholar at California Institute of Technology
 Title: Using Transport to Map the Brain



5:50 - 6:10 PM
 Elizabeth Bullitt, M.D.
 Professor of Neurosurgery
 Department of Neurosurgery, University of North Carolina, Chapel Hill
 Title: Assessing Pathology Using Vessel Morphology

6:10-6:30 PM
 Russell E. Jacobs, Ph.D.
 Member of the Beckman Institute at California Institute of Technology
 Title: Digital Atlases of Development Using Magnetic Resonance Microscopy



6:30 - 6:50 PM
 Chi S. Zee, M.D.
 Professor of Radiology and Neurosurgery
 Director of Neuroradiology at Keck school of Medicine
 Title: New Techniques and Applications of MRI and MRA

6:50 - 7:05 PM
 James Bading, Ph.D.
 Associate Professor of Research
 USC Department of Radiology
 Director, USC PET Molecular Imaging Laboratory
 Title: Brain Imaging with PET at USC

7:05-7:20 PM
 Questions and Answers with the Panel



7:20 - 7:30 PM
 John Peter Gruen, M.D.
 Associate Professor of Neurosurgery at Keck School of Medicine
 Chief of Staff, LAC+USC Medical Center
 Co-Chairman and Co-Organizer of the Symposium
 Title: Collaboration

7:30 - 7:40 PM
 Zach Hall, Ph.D.
 Director of Zilkha Institute
 Title: Zilkha Institute

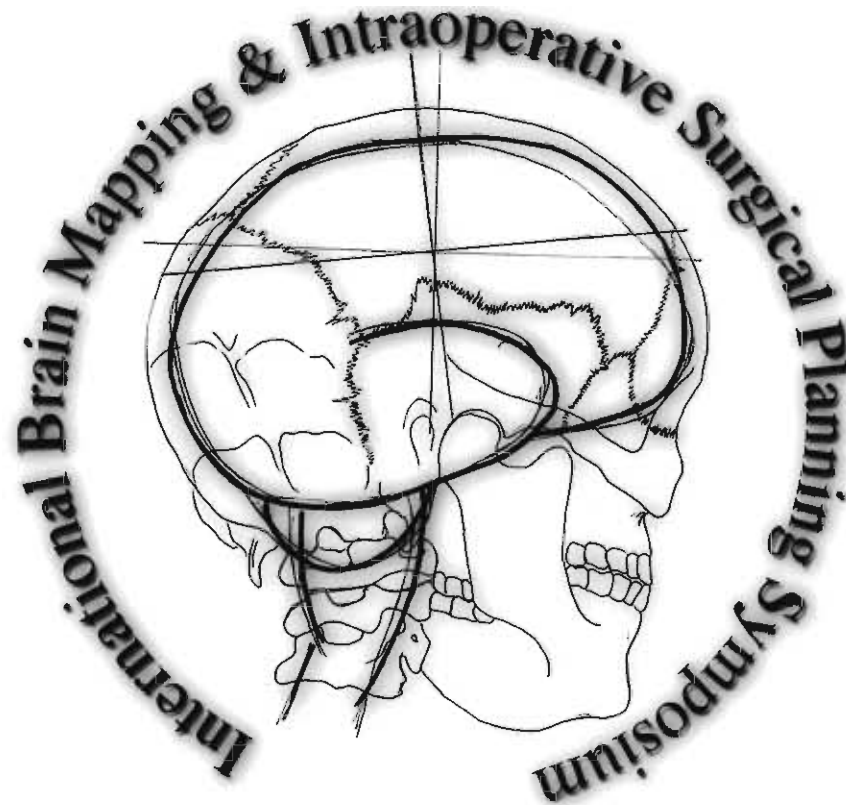


7:40 - 7:50 PM
 Babak Kateb
 Chairman and Organizer of the Symposium
 Director of NASA/JPL-Caltech-USC Brain mapping project
 Title: Closing Remarks



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Department of Neurological Surgery
 Monday Nov. 15th 2004



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