

**28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society: Engineering Revolution In BioMedicine****Marriott Marquis at Times Square, New York City, New York, USA****August 31-Sept 3, 2006****Pre-Conference Workshops: August 29-30, 2006****Conference Chair****Atam P. Dhawan, Ph.D.**
New Jersey Institute of Technology**Conference Co-Chair****Metin Akay, Ph.D.**
Dartmouth University**Program Chair****Andrew F. Laine, Ph.D.**
Columbia University**Program Co-Chair****Ki H.Chon, Ph.D.**
State University of New York,
Stony Brook**Finance Chair****Laura Wolf**
IEEE-EMBS**Publication Chair****Andreas Hielscher, Ph.D.**
Columbia University**Local Arrangement Chair****Helen Lu, Ph.D.**
Columbia University**Student Activities Chair****Barbara Oakley, Ph.D.**
Oakland University

The 28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS) will be held from August 31 to September 3, 2006 at the Marriott Hotel at Times Square in New York City, USA. The general theme of the IEEE EMBS 2006 Conference is "Engineering Revolution in BioMedicine" covering the broad spectrum of the medical physics, biological and biomedical sciences, and biomedical and clinical engineering. Specific themes include Molecular Imaging, Neural Engineering, Nano-Technologies for Biomedical Applications, Computational Biology and Bio-Informatics, Technical Innovations in the Pharmaceutical Industry, and Bio-Counterterrorism and Bio-Defense Technologies.

Special symposium and workshops would be conducted with leaders in the respective fields providing an overview as well as in-depth description of the cutting-edge research technologies. Special emphasis has been given to student activities including opportunities to meet and talk with leaders and pioneers in the biomedical engineering and biological sciences with discussions on exploring career paths.

In addition to invited and solicited presentations from leading researchers from academia and research laboratories, the conference technical program is also focused on the industrial research and leadership in the areas of biomedical engineering, biological sciences, medical physics, healthcare technologies and informatics, and pharmaceuticals.

The EMBC 2006 Conference includes a technical and commercial exhibit area with booths representing major industries in the biomedical and pharmaceutical engineering and sciences. In addition, booths from major publishers of biomedical journals and literature are expected to participate in the exhibit area.

The IEEE EMBS 2006 would provide a unique opportunity to participants to enjoy synergy with leaders in academic and industrial research through the technical program focused on visionary technologies. Technical research and tutorial papers from researchers and students are requested to be submitted through the conference website before April 3, 2006. The proposals for Special Symposiums and Workshops are requested to be submitted for consideration by December 1, 2005.

IEEE EMBS International Conference 2006 Website:**<http://embc2006.njit.edu>**

Program Highlights and Themes

Keynote Speaker: Nora D. Volkow, M.D.

Director, National Institute of Drug Abuse (NIDA)

August 31, 2006, 8.00 AM-9.00 AM

"Imaging the Addicted Human Brain: From Molecules to Behavior"

Special Themes and Plenary Talks

Molecular Imaging

Plenary Speaker: **Michael Phelps, Ph.D.**, Chair, Department of Molecular & Medical Pharmacology, Director, Crump Institute of Molecular Imaging, University of California at Los Angeles

Neural Engineering

Plenary Speaker: **John Donoghue, Ph.D.**, Henry Merritt Wriston Professor and Chairman, Department of Neuroscience, Brown University

Nano-Technologies for Biomedical Applications

Plenary Speaker: **Jennifer L. West, Ph.D.**, Isabel C. Cameron Professor and Director, Institute of Biosciences & Bioengineering, Rice University

Computational Biology and Bio-Informatics

Plenary Speaker: **Joseph M. Jasinski, Ph.D.**, Program Director, Life Sciences, IBM

Innovations in Pharmaceutical Industry

Plenary Speaker: **David Goldenberg, Sc.D., M.D.**, Chairman, Immunomedics, Inc.

Bio-Counterterrorism Technologies

Plenary Speaker: **Ernest T. Takafuji, M.D., M.P.H.**, Associate Director, NIAID, National Institutes of Health

Biomechanics

Plenary Speaker: **Van Mow, Ph.D.**, Stanley Dicker Professor of Biomedical Engineering and Orthopedic Bioengineering, Director, Liu Ping Laboratory for Functional Tissue Engineering Research, Chair, Department of Biomedical Engineering, Columbia University

Important Dates

Four Page Paper Submission: April 3, 2006

Notification of Acceptance: June 15, 2006

Final Program Available: July 1, 2006

Workshop Proposal Due: Dec 1, 2005

Mini-Symposia/Special Session Request: Dec 1, 2005

Exhibition Booth/Table Reservation: April 1, 2006

Early Conference Registration: July 15, 2006

Hotel Reservation: August 1, 2006

New York City

New York City is an internationally known city beautifully located along the Hudson River with the world famous financial district and Times Square in the midtown Manhattan area. The New York City, also known as "The Big Apple", offers a large panorama of tourist attractions and fun & entertainment activities to visitors including world famous Broadway shows at Times Square. Information about New York City tourist attractions can be found on the following websites:

<http://www.nyc.com/>

<http://www.nycvisit.com/home/index.cfm>

<http://www.timessquarebid.org/>

The IEEE EMBS Conference 2006 Hotel is the beautiful and elegant New York Marriott Marquis Hotel at Times Square located at 1535 Broadway, New York, New York 10036 USA.

A block of rooms has been reserved at a special reduced rate for conference attendees during the conference. For reservations, visit the website:

<http://marriott.com/property/propertypage/NYCMQ>

Paper Submission

Authors including researchers and students are requested to submit a 4-page paper through the conference website before April 3, 2006 for consideration for presentation in oral and poster sessions for one of the following but not limited to, program themes:

[Biomedical Signal Processing](#)

[Biomedical Imaging and Image Processing](#)

[Bioinformatics and Computational Biology](#)

[Micro- and Nano- Biotechnologies](#)

[Bio-sensors and Bio-instrumentation](#)

[Cellular and Functional Tissue Engineering](#)

[Pharmaceutical Studies, Drug Delivery and](#)

[Gene Therapy](#)

[Biomechanics, Bio-Robotics, and Surgical](#)

[Planning](#)

[Cardiovascular and Respiratory Systems](#)

[Neural and Rehabilitation Engineering, and](#)

[Neuromuscular Systems](#)

[Clinical Engineering and Healthcare](#)

[Information Systems](#)

IEEE EMBS International Conference 2006 Website: <http://embc2006.njit.edu>