

## *Themes and Tentative Scientific Program*

### Day 1 (December 11, 2002)

#### 08:30 Opening Ceremony

國家衛生研究院 吳成文院長致詞  
中央研究院 李遠哲院長致詞  
衛生署 李明亮署長致詞  
大會主席 黃煥常主任致歡迎詞

#### 09:00 Opening

#### 09:15 Keynote Speech: Future BME's Many Foundations

Bert Y. C. Fung, University of California, San Diego

#### 10:00-10:30 Coffee Break

#### Session 1: Biomechanics I

Chair: Savio L-Y Woo, University of Pittsburgh

#### 10:30 Molecular Basis of Mechanotransduction

Shu Chien, University of California, San Diego

#### 11:00 The Role of Biomechanics in Functional Tissue Engineering of Articular Cartilage

Van C. Mow, Columbia University

#### 11:30 From CAD/CAM to VIMS/CAOS – A True Renaissance of Musculoskeletal Biomechanics

Edmund Y. S. Chao, Johns Hopkins University

#### 12:00 Role of Microcirculation in Blood Volume Compensation

Jen Shih Lee, University of Virginia

#### 12:30-14:00 Lunch

#### Session 2: Biomaterials I

Chair: 薛敬和, 新竹清華大學

#### 14:00 Preparation and Clinical Trials of Bioadsorbents in Blood Purification

俞耀庭, 天津南開大學

#### 14:30 Pharmaceutical Engineering: A Novel Drug Delivering System for Macromolecular Drugs

Victor C Yang, University of Michigan

#### 15:00 A Naturally Crosslinking Agent from Gardenia Fruits and Its Applications in Biomaterials

宋信文, 新竹清華大學

#### 15:30-16:00 Tea Break

#### Session 3: Photonics and Instrument I

Chair: 王唯工, 中研院物理所

#### 16:00 Optical Imaging in Cognitive Neuroscience

駱清銘, 華中理工大學

#### 16:30 Multi-Photon Tissue Imaging: Applications in Biomedical Engineering and Biological Sciences

Peter T. C. So, Massachusetts Institute of Technology

#### 17:00 Phase Resolved Optical Coherence Tomography: Technology and Applications

Zhong Ping Chen, University of California, Irvine

19:00 Welcome Party  
Poster Session I  
Chair: John K-J Li, Rutgers University

Day 2 (December 12, 2002)

**Session 4: Biomaterial and Tissue Engineering I**

Chair: 林峰輝, 台灣大學

08:30 Interface of Biomaterials and Tissue Engineering

Kam W. Leong, Johns Hopkins University

09:00 Porous Collagen-Hyaluronan Matrix for Tissue Engineering

黃玲惠, 成功大學

09:30 Genomics in Hepatic Tissue Engineering

Wei Shou Hu, University of Minnesota

10:00-10:30 Coffee Break

**Session 5: Biomechanics II**

Chair: 席葆樹, 北京清華大學

10:30 Joint Mechanics and its Clinical Applications

Kai Nan An, Mayo Clinic

11:00 Biomechanics in Sports Medicine

Savio L-Y Woo, University of Pittsburgh

11:30 Lots of Rooms Down in the Micro-World, With or Without Life

Yaotsu Wu, California Institute of Technology

12:00 Ventricular Assist Devices

Jon Z. Wu, University of Pittsburgh

12:30-14:00 Lunch

**Session 6: Medical Imaging I**

Chair: 林康平, 工業技術研究院

14:00 Recent Advances in Ultrasound Imaging

K. Kirk Shung, Pennsylvania State University

14:30 Development of Innovative Digital X-ray Imaging Technologies

Hong Liu, University of Oklahoma

15:00 Intelligent Diagnostic Imaging and Analysis

Jian Zhong Qian, Siemens Corporate Research

15:30-16:00 Tea Break

**Session 7: Biomaterials and Tissue Engineering II**

Chair: 俞夢孫, 北京新興生物醫學研究中心

16:00 The Effects of Femoral Component Surface Finish on the Cement Mantle

王國照, 高雄醫學大學

16:30 Adsorption and Simulated Moving Bed Technologies for Producing High-Purity Biochemicals and Pharmaceuticals

Linda N.H. Wang, Purdue University

**17:00 Bone Guide of Regeneration**

盧世壁, 北京 301 總醫院

**19:00-20:30 Poster Session II**

Chair: 劉華昌, 台灣大學

**Day 3 (December 13, 2002)**

**Session 8: Photonics & Instrument II**

Chair: 李鍾熙, 工業技術研究院

**08:30 Integration of a Microsensor System**

Chung Chiun Liu, Case Western Reserve University

**09:00 Minimally Invasive Medical Microwave Ablation Technology**

James C. Lin, University of Illinois, Chicago

**09:30 Experimental Measurement and Analysis of Scattering Force and Gradient Force in Optical Manipulation and Trapping of Micro-Particles**

邱爾德, 東華大學

**10:00-10:30 Coffee Break**

**Session 9: Medical Imaging II**

Chair: 王威琪, 上海復旦大學

**10:30 Research Trends in Medical Image Informatics**

H. K. Huang, University of Southern California

**11:00 Functional and Molecular Imaging; Viewing the Wonder of Life**

Chin Tu Chen, University of Chicago

**11:30 High Field MRI: MR in the New Millennium**

Xiao Ping Hu, Emory University

**12:00 Motion Image Analysis in Biomedical Applications**

孫永年, 成功大學

**12:30-14:00 Lunch**

**Session 10: Rehabilitation**

Chair: 周有禮, 成功大學

**14:00 Research and Development of Total Knee Prosthesis in Taiwan**

鄭誠功, 陽明大學

**14:30 Biomechanics of Body Support Surfaces - Issues on Pressure Sore**

Arthur F. Mak, The Hong Kong Polytechnic University

**15:00 Is Rotational Acceleration More Injurious to the Brain than Linear Acceleration ?**

Albert I. King, Wayne State University

**15:30-15:45 Tea Break**

**15:45-19:00 CBMES Deliberation**

Chair: Savio L-Y Woo, University of Pittsburgh

**19:30 Farewell Banquet**