

Program

3D Dynamic Morphometry for Bridge between Structure and Function

October 19–21, 1988

University of Tsukuba, Japan

October 19th (Wed.) Tsukuba Dai-Ichi Hotel

19:00–19:30 Registration

19:30–21:30 Welcome Banquet

October 20th (Thu.)

9:00–17:00 University Hall, Univ. of Tsukuba

1. Toward the Bridge between Structure and Function

Morphometry of Non-Random Structures Related to Oxygen Flow in the Mammalian Respiratory System

Weibel, E. R. (Anatomisches Institut der Universität Bern)

Three-D Computational Geometry: The “Form” of Vascular Tree as Expressed by the Distribution of Distance in the Space, its organ Difference and Significance in Blood Flow

Takahashi, T., Chiba, T. (The Research Institute for Tuberculosis and Cancer, Tohoku University)

Unbiased Quantitative Measurements in the Study of the Developing Nervous System with Particular Reference to the Confocal Scanning Light Microscope

Howard, C. V., Ressoli, M. B. (Dept. of Anatomy, University of Liverpool)

2. Laser Microscopy

Confocal Scanning

Confocal Scanning Laser Microscopy: From 3-D Data Collection to 3-D Image Visualization and Analysis

Brakenhoff, G. J., Van der Voort, H. T. M., Mans, B., Oud, J. L.,

Zwart, R., Van Driel, R. (Dept. of Molecular Cell Biology, Dept. of Biochemistry, Universiteit van Amsterdam)

Dynamic Morphometry on Living Cells by Laser Fourier- and Optical-Transformation
Ishizaka, S. (Institute of Biological Sciences, University of Tsukuba)

Confocal Microscopy of Biological Specimens
Sheppard, C. J. R. (Dept. of Engineering Science, University of Oxford)

A Real Time Confocal Microscope
Awamura, D., Ode, T. (Lasertec Corporation)

Fluorometry

Submicrosecond Imaging Under a Pulsed-Laser Fluorescence Microscope
Kinoshita, K. (The Institute of Physical and Chemical Research, Biophysics Lab.),
Hibino, M., Shigemori, M., Ashikawa, I., Itoh, H., Nagayama, K., Ikegami, A.
Fujita, S. (Dept. of Pathology, Kyoto Prefectural University of Medicine)
Boyde, A. (Dept. of Anatomy and Embryology, University College, London)

October 21st (Fri)

9:00–17:00 University Hall, Univ. of Tsukuba

3. X-ray, Sonic, NMR Methods

3D Imaging of X-ray Microscopy
Kihara, H. (Jichi Medical School, School of Nursing)

Synchrotron X-ray Microtomography
D'Amico, K. L. (Exxon Research and Engineering Co.)
Suzuki, Y. (Central Research Laboratory, HITACHI, LTD.)
Niemann, B. (Forschungsgruppe Röntgenmikroskopie, Universität Göttingen)

NMR Microscopy
Kamei, H. (Electrotechnical Laboratory)

ESR Microscopic Imaging
Ikeya, M. (Dept. of Physics, Osaka University)

Clinical Application of Three Dimensional Computed Tomography in Diagnostic Radiology
Lin, P. P. (Dept. of Radiology, Northwestern Univ., Medical School)
Takagi, M. (Institute of Industrial Science, University of Tokyo)

4. Dynamic Simulation of Granular Systems

Quasi-Static Simulation of Liquefaction Phenomena of Granular Materials
Kishino, Y. (Dept. of Civil Engineering, Tohoku University)

Computer Simulation of Rapidly Flowing Granular Solids
Walton, O. (Earth Science Dept., Lawrence Livermore National Laboratory, Univ. of California)

Goto, T. (Japan Expert Clone Co. Ltd.)

Kimura, A. (Nireco Corporation)

3D Shape Analysis of Solids via the Discrete Fourier Sine (Cosine) Transformation

Shibata, T., Yamaguchi, K. (Dept. of Chemical Engineering, Hokkaido University)

Understanding Forms by Man and Computer Using Computer Graphics and Image Processing

Toriwaki, J., Ohshita, H., Saito, T. (Dept. of Information Engineering, Nagoya University)