

# Largest ever Exhibition MICROMACHINE to be held in Tokyo

Exhibition MICROMACHINE (The 17<sup>th</sup> International Trade Show for Micro/MEMS & Nanotechnologies), an international exhibition of superfine / fine processing, MEMS, nanotechnology and biotechnology, will be held in Tokyo for three days from Tuesday, November 7 through Thursday, November 9, 2006.

In the past, the exhibition has been held at the Science Museum near the Imperial Palace, but this year the venue will change to Tokyo International Forum in Yurakucho. The rapid increase in exhibitors resulting from the recent growth in the micromachine, MEMS and nanotechnology fields meant that a more spacious venue was needed.

Last year's exhibition featured 256 companies and organizations presenting exhibitions in 362 booths. This year's exhibition is expected to host approximately 280 companies and organizations at approximately 430 booths, making this the largest exhibition yet.

Exhibition MICROMACHINE will showcase new technologies and new products in the fields of superfine and fine processing, MEMS (microelectromechanical systems) and nanotechnology. It is the largest exhibition of its kind in Japan. We invite all interested parties to attend.

The exhibition office is distributing complimentary tickets to the exhibition. For more information, call Mesago Messe Frankfurt at (+81) 3-3262-8456. You may also pre-register at the exhibition's website (<http://www.micromachine.jp>).



## Fiscal 2006 MEMS International Standardization Workshop & Program

A MEMS International Standardization Workshop will be held as one of the events of MicroNano 2006 with the aim of strategic deployment of international standardization in the MEMS field. The Workshop will invite researchers from around the world who are working on the front lines of this field and have produced outstanding cutting-edge achievements. These researchers will talk about MEMS-related microtechnology and nanotechnology and about their experiences on the front lines of evaluating these technologies. Another objective of the workshop will be to deepen mutual understanding on the part of researchers in different countries.

**Date :** Monday, November 6, 2006 10:00 a. m. - 4:25 p. m.

**Venue :** Conference Square M+

(Mitsubishi Bldg. 10F, 2-5-2 Marunouchi, Chiyoda-ku, Tokyo)  
(<http://www.emplus.jp/access/>)

**Language :** English

**Entrance fee :** Free

**Sponsored by :** Micromachine Center

MEMS International Standardization Workshop Executive Committee

**Cosponsored by :** New Energy and Industrial Technology Development Organization (NEDO)

**Support provided by :** Ministry of Economy, Trade and Industry

<b>Session 1</b>	<b>Opening Ceremony</b>	
10 : 00-	Opening remarks	Yakichi Higo (Professor, Tokyo Institute of Technology and Chair, Workshop Executive Committee)
10 : 05-	Words of welcome from sponsors	Sumio Kozawa (General Manager, New Energy and Industrial Technology Development Organization [NEDO])
<b>Session 2</b>	<b>Frontiers of MEMS Devices</b>	
10 : 10-	"Glass Properties for Electrostatic Bonding in Process of the Packaging of MEMS Devices"	Prof. Dr. Sekwang Park (Kyunpook National University, Korea)
10 : 40-	"CNT Nano Electromechanical Transducers"	Prof. Dr. Christofer Hierold (ETH Zurich, Switzerland)
11 : 10-	"MEMS-based Nanopatterning : New Challenges and Opportunities for Materials Science"	Prof. Juergen Brugger (EPFL, Switzerland)
11 : 40-	— lunch —	
<b>Session 3</b>	<b>MEMS Evaluation Techniques and Standardization</b>	
13 : 00-	"MEMS Standardization Project at NIST"	Dr. Michael Gaitan (National Institute of Standards and Technology, U.S.A.)
13 : 30-	"Measurement of Micro-Tensile Properties for Gold Thin Film Using Micro-ESPI Technology"	Dr. Yong-Hak Huh (Korea Research Institute of Standards and Science, Korea)
14 : 00-	"Mechanical Material Characterization at the MEMS Materials Laboratory of IMTEK"	Prof. Dr. Oliver Paul (University of Freiburg, Germany)
14 : 30-	— Break —	
14 : 50-	"Deformation and Fatigue Mechanisms of Structural Films"	Prof. Christopher L. Muhlstein (The Pennsylvania State University, U.S.A.)
15 : 20-	"Round-Robin Test on Fatigue of Thin Films for MEMS Applications in Japan"	Prof. Kazuki Takashima (Kumamoto University, Japan)
15 : 50-	"A Comprehensive Assessment of Fatigue Failure in Micron-Scale Polycrystalline Silicon Structural Films for MEMS"	Prof. Robert O. Ritchie (University of California at Berkeley, U.S.A.)
<b>Session 4</b>	<b>Closing Ceremony</b>	
16 : 20-	Closing remarks	Naotake Oyama (Chair, MMC Standardization Project Committee)