MicroNano 2009 Concurrent Programs

7/29 (Wednesday) — Special Venue A

15th International Micromachine Nanotech Symposium ~MEMS World~ Program

"MEMS/NEMS evolved by integration and convergence" ~ Breakthrough for industrialization, Concentration of R&D activities into several major international institutes and Promising applications ~

Sponsor: Micromachine Center / MEMS Industry Forum — Chair: Ryutaro Maeda, Prime Senior Researcher, National Institute of Advanced Industrial Science and Technology

Opening		
10:30—10:35	Opening Remarks	Tamotsu Nomakuchi, Micromachine Center
10:35—10:40	Guest Speech	Takeshi Yonemura, Manufacturing Industries Bureau, METI
Keynote session	**Concentration of R&D into Major International Institutes**	
10:40—11:10	MEMS in France: the R&D model and vision at LETI / MINATEC	Andre Rouzaud, Silicon Heterogenous Integration Dept. CEA-LETI. MINATEC
11:10—11:40	Towards micro and nano technologies for integrated systems	Thomas Gessner, Prof. Head of Fraunhofer ENAS (Research Institution for Electronic Nano Systems)
11:40—12:10	Worldwide Growth Opportunities for MEMS: MIG's Perspective on MEMS Activities in the US and Emerging Technologies	Karen Lightman, Managing Director, MEMS Industry Group
Session 1	**New World Explored by MEMS**	
13:10—13:40	Animal Watch Sensor System for Human Health and Food Safety	Toshihiro Ito, Group Leader, Networked MEMS Technology Group, Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology
13:40—14:10	Silicon Light Modulators: An Enabling Technology	Thilo Sandner, Fraunhofer Institute for Photonic Microsystems
14:10—14:40	Wearable Sensor Technologies for Realizing Safe, Secure and Healthy Societies	Kiyoshi Itao, Prof., Tokyo University of Science
14:40—15:10	Harsh Environment Wireless MEMS Sensors for Energy & Power	Albert P. Pisano, Prof. and Chair, Department of Mechanical Engineering, UC Berkeley, BSAC
Session 2	**Latest Fabrication Process and Material Corresponding to Development Frontline**	
15:20—15:45	Can SOI break the MEMS law ? A material supplier's view	Markku Tilli, Senior Vice President, Research, Okmetic Oyj
15:45—16:10	Chip to Wafer bonding: The latest technology and future prospective	Sunil Wickramanayaka, Director of Technology, Technology Div., EVGroup
16:10—16:35	Hermetic packaging designs of MEMS : past and future prospective	Marco Moraja, Business Manager, Getter for MEMS, SAES Getters S.p.A.
Closing		
16:35—16:45	Closing Remarks	Keiichi Aoyagi, Micromachine Center

7/29 (Wednesday) — Special Venue B

MEMS Mounting & Packaging Forum

Sponsor: Micromachine Center / MEMS Industry Forum Japan Welding Society / Microbonding Study Group

13:00—13:10	Opening Remarks	Keiichi Aoyagi, Micromachine Center
13:10—13:50	Progress in MEMS Integration and Hopes for the Creation of New Industries	Susumu Sugiyama, Ritsumeikan University
13:50—14:30	Advances in Electronic Device Mounting and New Trends	Kozo Fujimoto, Osaka University
14:30—14:50	Creation of Functionally Integrated MEMS Through Wafer-level Packaging	Masao Kubo, Panasonic Electric Works Co., Ltd.
14:50—15:10	Development of Heterogeneous Material Multilayer MEMS Integration Technologies	Ryo Ota, Olympus Corporation
15:10—15:30	Development of Low-cost RF-MEMS Variable Capacitors using In-Line WLP (Wafer Level Package) Technology	Susumu Obata, Toshiba Corporation
15:30—15:50	Patterning Technology for Three-dimensional Substrates using Non-linear Lithography	Hiroaki Nishiyama, Osaka University

7/30 (Thursday) — Special Venue A

Japan-Germany MicroNano Business Forum

Sponsor: IVAM Microtechnology Network Cosponsor: Micromachine Center / MEMS Industry Forum

Time: 10:30 a.m. — 2:15 p.m.

Program: This forum is sponsored by the IVAM Microtechnology Network based in the North Rhine-Westphalia (NRW) province of Germany. It introduces the technologies and products of IVAM member companies (located mainly in Europe) and also provides opportunities for business tie-ups between IVAM member companies and Japanese companies.

7/30 (Thursday) — Special Venue B

BEANS Project Seminar

Sponsor :New Energy and Industrial Technology Development Organization (NEDO) / BEANS Laboratory — Moderator: Yutaka Takei, BEANS Laboratory

13:10—13:15	Opening Remarks from Sponsor	Akira Uehara, New Energy and Industrial Technology Development Organization (NEDO)
13:15—13:25	Opening Remarks from Project Leader	Atsushi Yusa, BEANS Laboratory
13:25—13:55	Prospects for MEMS and Expectations for BEANS Project	Masayoshi Esashi, Tohoku University
13:55—14:25	The MEMS Market and Recent Technical Trends	Tsuneyuki Miyake, Nikkei Microdevices
14:35—14:55	The Structure and Significance of the BEANS Project	Hiroyuki Fujita, Tokyo University
14:55—15:15	Use of Hydrogel Beads for Enclosure, Embedding and Assembly	Shoji Takeuchi, Tokyo University
15:15—15:35	Manufacture of Organic Nanostructures to Achieve Dramatic Improvement in Organic Semiconductor Performance	Chihaya Adachi, Kyushu University
15:35—15:55	Supercritical Film Formation Technologies for Filling In Nanogaps	Masakazu Sugiyama, Tokyo University
15:55—16:15	Ultra-low Damage Neutral Particle Beam Etching Technologies	Seiji Samukawa, Tohoku University
16:15—16:35	Application of MicroNano Processing Technologies to Infrared Sensors for Use in Outer Space	Masaaki Kimata, Ritsumeikan University
16:35—16:55	Macro-BEANS Strategies for Achieving Meter-class Large-area Advanced Devices	Toshihiro Ito, National Institute of Advanced Industrial Science and Technology (AIST)
16:55—17:00	Closing Remarks	Keiichi Aoyagi, Micromachine Center

7/31 (Friday) — Special Venue A

MicroNano 2009 MEMS Industry Forum — Achieving Growth and Broadening the Base of the MEMS Industry: New Ideas from the MEMS Industry Forum —

Sponsor: Micromachine Center / MEMS Industry Forum — Moderator: Masahiro Katashiro Micromachine Center / MEMS Industry Forum

Opening		
10:30—10:35	Opening Remarks	Koichi Imanaka Omron Corporation (Vice Chairman, MEMS Industry Forum)
10:35—10:50	Introductory Talk: What is Needed for MEMS Industry Development? — The Role and Activities of the MEMS Industry Forum —	Keiichi Aoyagi Micromachine Center
Session 1	**Data Evidence for MEMS Industry Growth**	
10:50—11:10	Current Trends in MEMS Technology and Future Prospects as Seen in International Conferences	Shuichi Shoji Waseda University
11:10—11:30	The Main Players in the MEMS Industry (Survey of Industry Trends in the MEMS Field)	Shun'ichi Adegawa Micromachine Center
11:30—11:50	Latest Trends in MEMS International Standardization — Growth in Demand and Business Activity —	Kuniki Ohwada Teikyo University
11:50—12:10	How to Use International Standards to Evaluate MEMS Materials	Kazuki Takashima Kumamoto University
Session 2	**Prevailing in International Competition Through Research and Development & Improvement of Manufacturing Infrastructure**	
13:05—13:25	Creating a MEMS "Integrated Center of Knowledge and Experience" in the Nanotech Arena	Masahiro Katashiro Micromachine Center / MEMS Industry Forum
13:25—13:45	Improving the MEMS Foundry Network System — Incorporation into Standard Processes —	Fumihiko Sato, Omron Corporation
13:45—14:05	MemsONE: A Verification Tool for Issues in the MEMS Design and Manufacturing Process	Yoshiharu Suizu Micromachine Center
14:05—14:25	MEMSPedia: An Encyclopedia for the MEMS Field	Tomoyuki Koike Micromachine Center
14:25—14:45	Personnel Training in New Project Development & Innovation in the Area of MicroNano Mass Production Technologies and Applied Device Manufacturing	Masaharu Takahashi National Institute of Advanced Industrial Science and Technology (AIST)
14:45—15:15	Research & Development for Establishing a MEMS Industry in Korea	Korea Institute of Industrial Technology (KITECH), Senior Researcher, Sung Ho Lee, Ph.D
Session 3	**Expectations for the Establishment of R & D Centers for the MEMS Industry**	
15:15—15:35	MEMS Industry Efforts in Tohoku	Yutaka Takei General Coordinator, Tohoku Industrial Cluster & MEMS PARK CONSORTIUM
15:35—15:55	Microfabrication Technology Efforts in Kyushu	Nagao Miyashita Industry-Academia Cooperation Center, Kita-Kyushu Foundation for the Advancement of Industry, Science and Technology
15:55—16:15	Establishing MicroNano Technology Centers Through Transcription — Deployment in the Sustainable Energy Field —	Tadashi Hattori Hyogo Prefectural University
Closing		
16:15—16:20	Closing Remarks	Keiichi Aoyagi Micromachine Center

Special Venue B

Fine MEMS Project Achievements Seminar

Sponsor: New Energy and Industrial Technology Development Organization (NEDO)

This seminar will present the total research and development achievements of the Highly Integrated and Complex MEMS Manufacturing Technology Development Project (Fine MEMS Project) (FY 2006-2008) that ended in FY 2008, in the Project's four development categories (MEMS/nano-function composite technology, MEMS/semiconductor integrated fabrication technology, MEMS/MEMS high integration composite technology, and establishment of a database of high integration composite MEMS knowledge) as well as in terms of the development of a fine MEMS system design platform.

Note: The details of the program have not yet been finalized.

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