2008 IEEE Systems Packaging Japan Workshop
Advanced Program

"The Technology Vision of Electronics Packaging for the 2010's"

Hotel de YAMA, Hakone, Japan

January 28 - 30, 2008

The 2008 SPJW Committee would cordially invite you to participate in the above workshop, which will be held during January 28-30, 2008 at the Hotel de YAMA, Hakone, Japan. This workshop is held every other year in Japan, and 2008 SPJW will be the twelfth after the first workshop in 1986, which covers state-of-the-art technologies in all areas of the system packaging from personal systems to high performance systems. Sessions will be conducted without formality of proceeding publication. Presentations should cover top-tier original R&D work in system packaging, and are expected to invite extensive and lively discussions among the participants.

Guidelines:

- Workshop official language is English.
- No abstracts/ proceedings will be published.
- No photography/voice recording of presentations will be permitted.
- 25 min technical presentations covering new development or critical overviews in packaging technology areas.

Organizing Committees:

General Chair	: Haruhiko Yamamoto (Fujitsu Interconnect Technologies Limited)
Vice General Chair	: Seiichi Saito (Mitsubishi Electric Corporation)
	Michitaka Kimura (Renesas Technology Corporation)
Program Chair & Treasurer	: Kishio Yokouchi (Fujitsu Interconnect Technologies Limited)

Committee members / advisors

JAPAN

Yoshitaka Fukuoka (WEISTI)
Yuzo Shimada (NEC Corporation)
Tohru Kishimoto (NTT-Advance Technology Inc.)
Yutaka Tsukada (KYOCERA SLC Technologies Corp.)
Shigeyuki Ogata (Nagano Oki Electric Co., Ltd.)
Hiroshi Go (Hitachi Ltd)
Yoichi Taira (IBM Japan, Ltd.)
Tadashi Ishikawa (Toshiba Corporation)

USA

George A. Katopis (IBM Corporation)
Robert C. Pfahl
(National Electronics Manufacturing Initiative)
Leonard W. Schaper (University of Arkansas)
Aroon V. Tungare (Motorola, Inc.)

Europe

Flavio Canavero (Politecnico di Torino)
Thomas-Michael Winkel (IBM Germany)
Rolf Aschenbrenner (Fraunhofer IZM.)
Eric Beyne (IMEC)

Advisors

Hiroshi Shibata (Osaka Institute of Technology)
Toshihiko Watari (Consultant)
Fumiyuki Kobayashi(Jabil Circuit, Inc)

Advanced Technical Program of Systems Packaging Japan Workshop 2008

I. Registration

27th Sunday

6:00 pm - 7:00pm

28th Monday

9:00 am

II. Technical Program

28th Monday

10:00 am -Opening Remarks

Haruhiko Yamamoto - Fujitsu Interconnect Technologies Ltd.

Keynote Session

Chair: Haruhiko Yamamoto - Fujitsu Interconnect Technologies Ltd.

10:15 am - Signal Bandwidth Bottleneck for Symmetrical Multi-Processors(TBD)

Michael G. Nealon, IBM Corp.

10:55 am - Positioning of Semiconductor Device in 21st Century as an Artificial Genome of Product

Koichi Ogawa - University of Tokyo

Session I: Environmental Aspects (RoHS, LCA Technologies)

Chair: Shigeyuki Ogata - Nagano Oki Electric Co., Ltd
Tohru Kishimoto – NTT Advance Technology Inc.
Co-chair: Rolf Aschenbrenner - Franhofer IZM

11:35 am - Reliability Assessment and Design of Solder Joints in Electronics Packages

Qiang Yu - Yokohama National University

*12:00 am -*Lunch

1:00 pm -Environmental Burdens of Printed Circuit Boards for IT Products

Katsuji Ebisu - Fujitsu Laboratories Ltd.

1:25 pm -Development of Flame Retarding Glass-Epoxy Laminates without Halogen or Phosphorous Compounds

Yokihiro Kiuchi – NEC Corp.

1:50 pm -Low Melting Solder Flip Chip Joints and Future Direction

Yutaka Tsukada - KYOCERA SLC Technologies Corp.

2:15 pm - Reliability Study Thermal Fatigue Life of Lead-Free Solders

Tsuyoshi Yamamoto – Fujitsu Advanced Technologies Ltd.

*2:40 pm -*Break

Session II: Advanced Packaging and Components (Thermal Management)

Chair: Yutaka Tsukada - KYOCERA SLC Technologies Corp.
Co-Chair: Seo Young Kim – Korea Institute of Science and Technology

3:00 pm - Diffusion of Heat in High-Density Wiring Substrates: An Opportunity to Develop a Novel Heat Conduction Solver

Wataru Nakayama - ThermTech International

3:25 pm - Current Thermal Management on Displays, Telecommunications, and Intelligent Robots in Korea

Seo Young Kim - Korea Institute of Science and Technology

3:50 pm - Nonuniform and Temperature-Dependent Power in Microprocessors

David Copeland - Sun Microsystems.

4:15 pm -Break

4:35 pm - Low Resistance Particle Filled Thermal interface and Hybrid Liquid Cooling

Ryan J. Linderman - IBM Zurich Research Lab.

5:00 pm - Micro Channel Cold-Plates

Koichi Mashiko - Fujikura Ltd.

Session III: IT Networks System

Chair: Seiichi Saito – Mitsubishi Electric Corp.
Co-Chair: Ricky Lee – Hong Kong University of Science and Technology

5:25 pm -Interconnecting Technology for High-Speed Transmission

Hideki Kusamitsu - Yamaichi Electronics Co. Ltd.

5:50 pm - Board Design Technology for Gbps-Class Signal Transmission in Communication Infrastructure Systems

Yoshiaki Uematsu - Mitsubishi Electric Corp.

6:30 pm - Welcome Buffet Dinner
-8:30 pm

29th Tuesday

Session IV: Digital Consumer Products & Mobile Information Systems

Chair: Yuzo Shimada - NEC Corp.
Co-Chair: Aroon V. Tungare - Motorola Inc.

8:05 am - 3D System Integration Challenges and Opportunities

Eric Beyne - IMEC

8:30 am -Recent Advances in RF SiP Designs

Chris Barratt - Insight SiP

8:55 am - Handheld Devices and Sensor Networks

Aroon V. Tungare - Motorola Inc.

9:20 am - Underfilling Flip Chip Packages for Mobile Communications with Transfer Molding Technologies

Kwei-Kuan Kuo - NXP Semiconductors Switzerland AG

9:45 am - Break

Keynote Session

Chair: Masahiro Suzuki – Fujitsu Advanced Technologies Ltd.

10:05 am - Peta-Scale Computing

Tadashi Watanabe - RIKEN

Session V: High Performance Servers

Chair: Jie Wei, Fujitsu Advanced Technologies Ltd
Co-chair: George A. Katopis, IBM Corp.

10:45 am - The Blue Gene/P Supercomputer Packaging and Applications

Paul Coteus - IBM Corp.

11:10 am - Hardware Technology for NEC Supercomputer High Performance Server SX-9

Hitoshi Ishizuki - NEC Corp.

11:35 am - Removing Wire: The Ultimate Goal of Systems Packaging

Leonard W. Schaper - University of Arkansas

12:00 am -Lunch

1:00 pm -System Packaging Design for Hitachi Blade Server BS320

Kouichi Koyano - Hitachi Ltd.

1:25 pm - System Packaging and Technologies of IBM System z High-end Servers

Hubert Harrer - IBM Germany

1:50 pm – Key Packaging Technologies for future high Performance Computing

Mikio Nishihara – Fujitsu Ltd.

Session VI: Advanced Packaging and Components -2

Chair: Hiroshi Go - Hitachi Ltd.
Co-chair: Shlomo Novotny - Vette Corp.

2:15 pm - Comparing Techniques for Temperature-Dependent Warpage Measurement

Alan Barney - Akrometrix LCC

2:40 pm - Break

3:00 pm - System in Package Development for Power Systems

Hsueh-kuo Liao - Delta Electronics Inc.

3:25 pm - Digital Control - Future of the Power Supply Industry

Vijay Phadke - Emerson Network Power

3:50 pm - HVDC Power Distribution on NEDO Sendai Demonstratio

Keiichi Hirose - NTT Facilities, Inc.

4:15 pm - Break

Session VII: Advanced Materials (Bio/Nano Technologies)

Chair: Yoichi Taira - IBM Japan Ltd.
Co-Chair: Eric Beyne - IMEC

4:35 pm - Recent Developments of Silicone Thermal Interface Materials

Kei Miyoshi - Shin-Etsu Chemical Co., Ltd.

5:00 pm - Die Attach Materials for Ultra Thin Wafers in Advanced Packaging

Masahiko Hiro - Hitachi Chemical Co., Ltd.

5:25 pm - State of the Art Diamond Composites for Thermal Management in High-End Processors

Ravi Bollina - Plansee SE

5:50 pm - Thermal and Electric Bumps utilizing Carbon Nanotubes for High Power Amplifiers

Daisuke Iwai - Fujitsu Laboratories Ltd.

6:30 pm - Workshop Banquet

-8:30 pm

Banquet Speech

Chair: Kishio Yokouchi - Fujitsu Interconnect Technologies Ltd.

7:15 pm – Service Robots

Takashi Uchiyama - Fujitsu Laboratories Ltd.

30th Wednesday

Session VIII: Advanced Packaging and Components -3

Chair: Michitaka Kimura - Renesas Technology Corp.
Co-chair: Leonard W. Schaper - Univ. of Arkansas

8:05 am - Trends in Embedded Components

E Jan Vardaman, TechSearch International Inc.

8:30 am - Verification of 3D Stacking Device Technology and Applications

Nobuaki Miyakawa - Honda Research Institute Japan Co., Ltd.

8:55 am - System-in-Package Solutions with Embedded Active and Passive Components

Rolf Aschenbrenner, Franhofer IZM

9:20 am – Closing Remarks

Workshop Excursion

10:30 am - Departure from the Hotel (Lunch on bus)

1:00 pm - Arrival at Tokyo Edo-Museum (Historical Tour)

3:00 pm - Arrival at Fujitsu Net-Community Facility (Technical Tour Group A)

- Arrival at Fujitsu Platform Solution Center (Technical Tour Group B)

4:30 pm - Arrival at Fujitsu Platform Solution Center (Technical Tour Group A)

- Arrival at Fujitsu Net-Community Facility (Technical Tour Group B)

5:10 pm - Departure from Fujitsu Net-Community Facility and Fujitsu Platform Solution Center

5:40 pm - Dismiss at Tokyo Station