

IEEE European Packaging Workshop Como 2007

Final Program



COMPONENTS, PACKAGING,

AND MANUFACTURING

TECHNOLOGY SOCIETY

and the



**10th European System Packaging Workshop
Como, Italy**

January 29 – January 31, 2007

www.packagingworkshop.polito.it

Location: Grand Hotel di Como - Como, Italy www.grandhoteldicomo.com

General Chair:	Flavio Canavero (Politecnico di Torino, Italy)
General Co-Chair:	Carlo Cognetti (STMicroelectronics, Italy)
Program Chair:	Thomas-Michael Winkel (IBM, Germany)
Co-Program Chair:	Cian O'Mathuna (Tyndall National Institute, Ireland)
Treasurer and local arrangement:	Carla Giachino (Politecnico di Torino, Italy)
Technical Program Committee:	Rolf Aschenbrenner (Fraunhofer IZM, Germany)
	Eric Beyne (IMEC, Belgium)
	Evan Davidson (IBM, USA – ret.)
	Christine Kallmayer (Fraunhofer IZM, Germany)
	George Katopis (IBM, USA)
	Erich Klink (IBM, Germany)
	William Samaras (Intel, USA)

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Monday: January 29, 2007

Registration: 9:00 AM to 12:00 Noon

Lunch at 12:00 Noon

Start of Afternoon Session **13:00**

Welcome

General Chair, Flavio Canavero (Politecnico di Torino, Italy)

Keynote Presentation **13:10**

"System on a Package"

Madhavan Swaminathan (Georgia Tech., USA)

Session 1: **Ambient Intelligence & Heterogeneous Integration**

Session Chair: *Christine Kallmayer (Fraunhofer IZM, Germany)*

Keynote Presentation **13:50**

"Heterogeneous Integration"

Herb Reichl (Fraunhofer IZM, Germany)

- **3D Chip Integration & Silicon Packaging Technology using Silicon Through-Vias**
John U. Knickerbocker (IBM TJ Watson Research, USA) **14:30**
- **Micropower Systems for Ambient Intelligence**
Cian Ó Mathúna, Terence O'Donnell, Saibal Roy, James Rohan
(Tyndall National Institute, Ireland) **14:55**

Coffee Break 15:20 – 15:50

- **Textile Sensors**
Thorsten Linz (Fraunhofer IZM, Germany) **15:50**
- **Ubiquitous intelligence for paper and packaging products**
Li-Rong Zheng (Media Electronics, Sweden) **16:15**
- **New developments on Heterogeneous Integration**
Nicolas Sillon, Gilles Poupon (LETI, France) **16:40**

Extended Break 17:05 – 18:00

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Tuesday: January 30, 2007

Breakfast 7:00 – 7:45

Morning Session start 8:00

Keynote Presentation

8:00

"Removing Wire: the Ultimate Goal of Systems Packaging"

Len Schaper (University of Arkansas, USA)

Session 3: Communication Systems

Session Chair: *Eric Beyne (IMEC, Belgium)*

Keynote Presentation

8:40

"Revolution in semiconductor packaging, from design to manufacturing"

Carlo Cognetti (STMicroelectronics, Italy)

- **Miniaturization Technologies for Handheld Communication Devices**
Aroon Tungare (Motorola, USA) **9:20**
- **New Generation Interconnection Technology:
Optical Interconnects on Printed Circuit Boards and Backplanes**
Elmar Griese (University Siegen, Germany) **9:45**

Coffee Break 10:10 – 10:40

- **Packaging of Electro-Optical Components for Next Generation,
High-Speed and High-Density PCB based Optical Interconnects**
Jonas Weiss, Bert Offrein, (IBM Research Zurich, Switzerland) **10:40**
- **Demands on Future System Packaging**
Ali Arslan (Nokia Research Center, Finland) **11:05**
- **Technologies for Hard and Software Reconfigurable Radios**
Eric Beyne (IMEC, Belgium) **11:30**

Lunch 12:00 – 13:00

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Keynote Presentation **13:20**

"Packaging & Systems Integration"

Evan Davidson (IBM, USA - Ret.)

Afternoon Session starts 14:00

Session 4: High Performance Computing

Session Chairs: George Katopis (IBM, USA), Erich Klink (IBM, Germany – Ret.)

Keynote Presentation **14:00**

"Massively Multithreaded System Packaging Requirements"

Robert Guernsey (IBM TJ Watson Research, USA)

- **Designing for Low Power**
Tawfik Arabi (Intel, USA) **14:40**
- **System Packaging and Technology of the IBM High End Server Z9**
Hubert Harrer (IBM, Germany) **15:05**
- **System Packaging Design for Hitachi blade server BS320**
Koichi Koyano (Hitachi, Japan) **15:30**

Coffee Break 15:55 – 16:25

- **Packaging Integration for High Power and High Speed Computing Systems - How packaging evolution can contribute to intrasystem communication**
Stefano Oggioni, Mauro Spreafico, Michele Castriotta (IBM, Italy) **16:25**
- **Multicore Packaging**
Bill Samaras (Intel, USA) **16:50**
- **Design tradeoffs in Organic substrates for Server Microprocessor applications**
Ed Blackshear (IBM, USA) **17:15**

Tour to Como (including dinner in Como) is being planned in the afternoon starting from the hotel at 18:00

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Wednesday: January 31, 2007

Breakfast 7:00 – 7:45

Morning Session starts 8:00

Keynote Presentation

8:00

“Overview of advanced 3D packaging”

Christian Val (3D Plus, France)

Session 5: Simulation and Modelling

Session Chair: *Cian O Mathuna (Tyndall National Institute, Ireland)*

- **Embedded passives for optimization of RF system integration**
Grit Sommer (Infineon Technologies, Germany) **8:40**
- **RF System in Package, design methodology and practical examples of highly integrated systems**
Chris Barratt (Insight SiP, France) **9:05**
- **Model extraction**
Flavio Canavero (Politecnico di Torino, Italy) **9:30**

Coffee Break 9:55 – 10:30

Keynote Presentation

10:30

”Drivers for the Next Decade of Packaging”

Jan Vardaman (TechSearch, USA)

- **Signal Bandwidth Requirements on Computer System Package Technology**
Dale Becker (IBM, USA) **11:10**
- **A General Approach for Circuit Block Modeling of Linear Circuits and Passive Multiport Components**
Pietro Brenner (Infineon Technologies, Germany) **11:35**
- **Statistical Analysis of Signal Integrity in Backplane Systems**
Thomas Gneiting (ADMOS, Germany) **12:00**

Lunch 12:30 – 13:30

Technical Presentation of MEMS Manufacturing (STMicroelectronics)

by Sara Zerbinì, MEMs Product Design Manager

14:00

Meeting will end at 16:00