

# FINAL PROGRAM

## SUNDAY JUNE 27: WELCOME

- 18.00 Registration  
19.00 Welcome reception

## MONDAY JUNE 28

- 8.30 Registration continued

### SESSION 1: KEYNOTE

- 8.30 Naoki Nishi, NEC Corp., Japan  
*MPSoc Technology Direction in Real World Computing*  
9.30 Break

### SESSION 2: DESIGN METHODOLOGY (MINI-KEYNOTES)

- 10.00 Guy Bois, Ecole Polytechnique Montréal, Canada  
*Fast and accurate estimation for automatic design space exploration of MPSoC systems*  
10.12 Frédéric Pétrot, TIMA Laboratory, INP-Grenoble, France  
*Annotation within dynamic binary translation for fast and accurate system simulation*  
10.24 Norbert Wehn, University of Kaiserslautern, Germany  
*Efficiency Metrics for Design Space Exploration of Wireless Baseband Processing*  
10.36 Ahmed Jerraya, CEA-LETI, France  
*How can MPSoC take benefit from emerging 3D-IC technology?*  
10.48 Vijaykrishnan Narayanan, Pennsylvania State University, USA  
*Influence of emerging device technologies on system design*  
11.00 El Mostapha Aboulhamid, Université de Montréal, Canada  
*Timing verification of subsystems integration*  
11.12 Suzanne Lesecq, CEA LETI MINATEC, France  
*Robust control of a FLL*  
11.24 Panel with the lecturers (for Session 1 and 2)  
12.30 Lunch

### SESSION 3: DOMAIN SPECIFIC PROCESSING (IN-DEPTH TECHNICAL PRESENTATIONS)

- 14.00 Ping Chao and Youn-Long Lin, National Tsing Hua University, Taiwan  
*Memory Access Optimization for Ultra High Resolution Video Decoding*  
14.30 Emil Matus, Technical University Dresden, Germany  
*MPSoC architectures for baseband signal processing of future mobile terminals*  
15.00 Zhiyi Yu, Fudan University, China  
*Pushing many-core processors as powerful and energy-efficient as ASIC for domain-specific applications*  
15.30 Break

### SESSION 4: HW/SW INTERACTION (IN-DEPTH TECHNICAL PRESENTATIONS)

- 16.00 Takahisa Suzuki, Fujitsu Laboratories LTD., Japan

*System impact caused by software-hardware harmonized implementation*

- 16.30 David Kleidermacher, Green Hills Software, USA

*Multicore Virtualization for ARM Processors*

- 17.00 Chong-Min Kyung, KAIST, Korea

*Power and Temperature-Aware Clock Frequency and Thread Assignment in Multi-layer MPSoC*

- 17.30 Panel with the lecturers (for Session 3 and 4)

- 19.00 Diner

## TUESDAY JUNE 29

### SESSION 5: KEYNOTE

- 8.30 Kazuo Kajimoto, Panasonic Corporation, Japan  
*State Transition of Software Innovation in relation to Hardware Innovation - Once was "Follower", through "Leader", it would be "Constraint" -*  
9.30 Break

### SESSION 6: MPSOC PLATFORM (MINI-KEYNOTES)

- 10.00 David Atienza, EPFL, Switzerland  
*Active Cooling Control for Thermal Management of 3D MPSoCs*  
10.12 Soo-ik Chae, Seoul National University, Korea  
*A multi-core platform with three video-specific processors for HD video codec applications*  
10.24 Jenq-Kuen Lee, National Tsing-Hua University, Taiwan  
*Parallelization of Stereo Vision Applications on Embedded Multi-Core Platforms*  
10.36 John Goodacre, ARM, UK  
*Extending the ARM Architecture*  
10.48 Chris Rowen, Tensilica, USA  
*Silicon-Efficient DSPs and Digital Architecture for LTE Baseband*  
11.00 Yuan Xie, Pennsylvania State University, USA  
*Modeling, Architecture, and Applications of Emerging Memory technologies for MPSOC*  
11.12 Rolf Ernst, Technical University of Braunschweig, Germany  
*Certification of Trusted MpSoC Platforms*  
11.30 Panel with the lecturers (for Session 6)  
12.30 Lunch

### SESSION 7: PROGRAMMING AND SCHEDULING (IN-DEPTH TECHNICAL PRESENTATIONS)

- 14.00 Martti Forsell, VTT, Finland  
*Strong programming models for MP-SOCs*  
14.30 Kees Vissers, Xilinx, USA  
*Programming and Performance of FPGAs all in C and C++*  
15.00 Martin Schoeberl, Technical University of Denmark, Denmark  
*Schedule Memory Access, not Threads*  
15.30 Break

**SESSION 8: LOW POWER (IN-DEPTH TECHNICAL PRESENTATIONS)**

- 16.00 Kunio Uchiyama, Hitachi, Ltd., Japan**  
*Power-efficient Heterogeneous Multicore for Digital Convergence*
- 16.30 Yasuhiro Tawara, Renesas Technology Corp., Japan**  
*DVFS and power-off controls on a multicore operating system*
- 17.00 Tuomas Jarvinen, ST-Ericsson, Finland**  
*Designing for low power in SoC projects*
- 17.30 Panel with the lecturers (for Session 7 and 8)**
- 18.30 Speaker's Meeting**
- 19.00 Diner**

**WEDNESDAY JUNE 30**

**SESSION 9: KEYNOTE**

- 8.30 Marco Cornero, ST-Ericsson, Italy**  
*MPSoc's in Mobile phones: parallel computing for the masses*
- 9.30 Break**

**SESSION 10: NOC & MANY-CORE (MINI-KEYNOTE)**

- 10.00 Marcello Coppola, STMicroelectronics, France**  
*NoC: Myth or Reality?*
- 10.12 K. Charles Janac, Arteris Inc., USA**  
*Network on Chip - Not just for Complex SoCs Anymore*
- 10.24 Gabriela Nicolescu, Ecole Polytechnique de Montréal, Canada**  
*Multi-Objective Design Space Exploration for MPSoC*
- 10.36 Omar Hammami, ENSTA PARISTECH, France**  
*Design and Implementation of a NOC Based 2048 PE on Large Scale Emulator*
- 10.48 Sungjoo Yoo, POSTECH, Korea**  
*Network awareness in memory controllers for many-core*
- 11.00 Panel with the lecturers (for Session 10)**
- 12.00 Lunch**

**SESSION 11: KEYNOTES**

- 13.30 Sebastian Steibl, Intel, Germany**  
*Single-chip Cloud Computer: Architecture, Design and Application of a 48 Core Research Microprocessor*

**SESSION 12: HETEROGENEOUS MPSOCs (IN-DEPTH TECHNICAL PRESENTATIONS)**

- 14.30 Yankin Tanurhan, Virage Logic, USA**  
*Seamless Integration of Heterogeneous Co-Processors in Today's SoCs*
- 15.00 Sri Parameswaran, University of New South Wales, Australia**  
*Heterogeneous Multi-Processor Pipelines: an MPSoC Story*
- 15.30 Break**

**SESSION 13: APPLICATIONS (IN-DEPTH TECHNICAL PRESENTATIONS)**

- 16.00 Rudy Lauwereins, IMEC, Belgium**

*Processors for wireless sensor nodes: can you do something useful in just a few microwatts*

- 16.30 Kees van Berkel, ST-Ericsson, Eindhoven University of Technology, France**  
*Multi-Core for Mobile Phones*
- 17.00 Yukoh Matsumoto, TOPS Systems Corporation, Japan**  
*CG Application Domain Specific Heterogeneous Multi-Core Processor*
- 17.30 Panel with the lecturers (for Session 12 and 13)**
- 19.00 Banquet**

**THURSDAY JULY 1**

**SESSION 14: KEYNOTE**

- 8.30 Pieter J. Mosterman, MathWorks, USA**  
*A computational semantics of time-based models and its role in Model-Based Design*
- 9.30 Break**

**SESSION 15: HW & SW TECHNIQUES (MINI-KEYNOTE)**

- 10.00 Ulrich Ramacher, Infineon, Germany**  
*On the Challenges of Programming XGOLD SDR 20*
- 10.12 Raphaël David, CEA LIST, France**  
*Low Power management in embedded multi-core architectures*
- 10.24 Kees Goossens, Eindhoven University of Technology, Netherlands**  
*Virtualized Processor Power Management*
- 10.36 Joachim Kunkel, Synopsys, USA**  
*Virtual Prototyping : Reality for Prime Time?*
- 10.48 Kiyong Choi, Seoul National University, Korea**  
*Some Applications of Coarse-Grained Reconfigurable Array*
- 11.00 Lars Bauer, Karlsruhe Institute of Technology, Germany**  
*KAHRISMA: A Multi-grained Reconfigurable Multicore Architecture*
- 11.12 Pieter Van der Wolf, Virage Logic, Netherlands**  
*Efficient and predictable integration of MPSoCs*
- 11.30 Panel with the lecturers (for Session 15)**
- 12.30 Lunch**

**SESSION 16: NOC (IN-DEPTH TECHNICAL PRESENTATIONS)**

- 14.00 Yuichi Nakamura, NEC Corp., Japan**  
*The layout evaluation and hierarchical layout method of NoCs*
- 14.30 Takashi Miyamori, Toshiba Corporation, Japan**  
*Evaluation of Network-on-Chip for Large Scale Many-Core Systems*
- 15.00 Ian O'connor, Lyon Institute of Nanotechnology, France**  
*Optical networks on chip for MPSoC data communication*
- 15.30 Panel with the lecturers (for Session 16)**
- 17.45 Dinner (w/ cruise watching cormorant fishing)**

**FRIDAY JULY 2**

**SESSION 17: KEYNOTE**

**8.30 Jae Cheol Son, Samsung Electronics, Korea**  
*MPSoC Technology for New Wave of User Experiences*

**9.30 Break**

**SESSION 18: EMERGING DEVICE AND DESIGN TECHNOLOGIES (MINI-KEYNOTES)**

**10.00 Koichiro Yamashita, Fujitsu Laboratories LTD., Japan**  
*Evaluation and development methodology for progressing of MPSoC technology to industrial field of mobile platform*

**10.12 Tsuyoshi Isshiki, Tokyo Institute of Technology, Japan**  
*MPSoC Platform for Super Hi-vision Video Processing System*

**10.24 Benjamin Carrion Schafer, NEC Corp., Japan**  
*Complete C-Based SoC Design: Is it possible?*

**10.36 Jan Madsen, Technical University of Denmark, Denmark**  
*A Bio-Inspired Reconfigurable Hardware Architecture Supporting Self-organisation and Self-healing*

**10.48 Break**

**SESSION 19: 3D-IC TECHNOLOGIES (IN-DEPTH TECHNICAL PRESENTATIONS)**

**11.00 Tadahiro Kuroda, Keio University, Japan**  
*ThruChip Interface (TCI) for 3D System Integration*

**11.30 Hsien-Hsin Sean Lee, Georgia Institute of Technology, USA**  
*Design, implementation, and test for a 3D-IC many-core processor*

**12.00 Panel with the lecturers (for Session 18 and 19)**

**13.00 Lunch**

**Further information: <http://www.mpsoc-forum.org/>**