International Symposium on Networks-on-Chip

Call for Papers

11th IEEE/ACM International Symposium on Networks-on-Chip

October 19 – 20, 2017

Seoul, South Korea

(*Co-located with Embedded Systems Week 2017*)

The International Symposium on Networks-on-Chip (NOCS) is the premier event dedicated to interdisciplinary research on on-chip, chip-scale, and multichip package scale communication technology, architecture, design methods, applications and systems. NOCS brings together scientists and engineers working on NoC innovations and applications from inter-related research communities, including computer architecture, networking, circuits and systems, packaging, embedded systems, and design automation. Topics of interest include, but are not limited to:

NoC Architecture and Implementation
- Network architecture (topology, routing, arbitration)
- NoC Quality of Service
- Timing, synchronous/asynchronous communication
- NoC reliability issues
- Network interface issues
- NoC design methodologies and tools
- Signaling & circuit design for NoC links

NoC Analysis and Verification
- Power, energy & thermal issues (at the NoC, un-core and/or system-level)
- Benchmarking & experience with NoC-based hardware
- Modeling, simulation, and synthesis of NoCs
- Verification, debug & test of NoCs
- Metrics and benchmarks for NoCs

Novel NoC Technologies
- New physical interconnect technologies, e.g., carbon nanotubes, wireless NoCs, through-silicon, etc.
- NoCs for 3D and 2.5D packages
- Package-specific NoC design
- Optical, RF, & emerging technologies for on-chip/in-package interconnects
- In-memory network and NoCs for new memory technologies

NoC Application
- Mapping of applications onto NoCs
- NoC case studies, application-specific NoC design
- NoCs for FPGAs, structured ASICs, CMPs and MPSoCs
- NoC designs for heterogeneous systems, fused CPU-GPU architectures, etc
- Scalable modeling of NoCs

NoC at the Un-Core and System-level
- Design of memory subsystem (un-core) including memory controllers, caches, cache coherence protocols in NoCs
- NoC support for memory and cache access
- OS support for NoCs
- Programming models including shared memory, message passing and novel programming models
- Issues related to large-scale systems (datacenters, supercomputers) with NoC-based systems as building blocks

On-Chip Communication Optimization
- Communication efficient algorithms
- Communication workload characterization & evaluation
- Energy efficient NoCs and energy minimization

Off-Chip and Rack-Level Communication
- All aspects of inter-chip network design
- All aspects of rack-level network design

Electronic paper submission requires a full paper, up to 8 double-column IEEE format pages, including figures and references. The program committee in a double-blind review process will evaluate papers based on scientific merit, innovation, relevance, and presentation. *Submitted papers must describe original work that has not been published before or is under review by another conference or journal at the same time*. Each submission will be checked for any significant similarity to previously published works or for simultaneous submission to other archival venues, and such papers will be rejected. Proposals for special sessions and demos are invited. Paper submissions and demo proposals by industry researchers or engineers to share their experiences and perspectives are also welcome. Please find the detailed submission instructions for paper submissions, special session, and demo proposals at the submission page. Further information is available via: ***http://www.arc.ics.keio.ac.jp/nocs17/***

Important Dates (extended firm deadlines)

Abstract registration deadline	**May 15, 2017**	Notification of acceptance	**July 1, 2017**
Full paper submission deadline	**May 15, 2017**	Final version due	**August 1, 2017**

General Chairs:
Axel Jantsch (Vienna University of Technology, Austria)
Hiroki Matsutani (Keio University, Japan)

Publicity Chairs:
Jose Flich (Universitat Politecnica de Valencia, Spain)
Paul Gratz (Texas A&M University, USA)
Dong Xiang (Tsinghua University, China)

Web Chair:
Akram Ben Ahmed (Keio University, Japan)

Local Arrangements Chair:
Hyung Gyu Lee (Daegu University, Korea)

Steering Committee Chair:
Radu Marculescu (Carnegie Mellon University, USA)

Technical Program Chairs:
Zhonghai Lu (KTH Royal Institute of Technology, Sweden)
Umit Ogras (Arizona State University, USA)

Publication Chair:
Maurizio Palesi (Kore University, Italy)

Industry Chair:
Soojung Ryu (Samsung, Korea)

Special Session / Demo Chair:
Paul Bogdan (University of Southern California, USA)

Finance Chair:
Sudeep Pasricha (Colorado State University, USA)