

Message from the Chairs

Welcome to the 8th IEEE/ACM International Symposium on Networks-on-Chip (NOCS). NOCS is the premier event dedicated to interdisciplinary research on Networks-on-Chip innovations. It is a unique venue that brings together scientists and engineers from diverse, but inter-related research communities, including computer architecture, general networking, circuits and systems, embedded systems, and design automation.

The NOC Symposium has come a long way since the first edition in Princeton in 2007. This year it will be held in Ferrara, one of the most important cities of the Italian Renaissance, after visiting several European and American cities: Princeton (2007 - USA), Newcastle (2008 - UK), San Diego (2009 - USA), Grenoble (2010 - France), Pittsburgh (2011 - USA), Copenhagen (2012 - Denmark), and Phoenix (2013 - USA). In 1995, UNESCO has included the historical centre of Ferrara in the list of World Cultural Heritage as a wonderful example of a town planned in the Renaissance and still keeping its historical centre intact. Ferrara also boasts outstanding art testimonies from the Middle Ages, especially its cathedral, dating back to the 12th century.

The atmosphere of the past blends in harmoniously with the lively atmosphere of the present, which the development of facilities for medical and engineering studies contributes to a large extent. To date, up to 14 companies spun-off from the university and have their headquarters in the Center for Innovation and Technology Transfer, with core businesses ranging from electronics to clinical research and pharmacology. Ferrara also has one of the most important electromagnetic compatibility Labs in Italy, mainly serving the companies of the strong Northeastern Industrial District of Italy. The recent survey of the quality of research performed by the National Agency for the Evaluation of Universities and Research Institutes has ranked the University of Ferrara first out of 47 Italian Departments operating in the field of Information and Communication Technologies. Therefore, Ferrara is an ideal location to host the flagship symposium on on-chip interconnects.

The paper selection process for this years NOCS edition was rigorous and was made possible because of an outstanding program committee of 54 researchers. We received 83 submissions out of which the committee accepted 21 full papers and 10 papers with poster presentations accompanied by extended abstracts in the proceedings. Each paper was assigned to four program committee members and during the review process with additional reviews as necessary. A total of 322 reviews were obtained. The review process was double blind as were the reviewer identities. The reviews were made available to the committee members for on-line discussion over a period of approximately two weeks. Two papers were shepherded prior to acceptance as full papers. Committee members diligently spent a great deal of time in discussions and debating the merits of each paper a special thanks to the program committee members for their efforts.

The technical program is enriched by two special sessions covering topics at the leading edge of NOC evolution. The first special session covers the state of the practice in silicon photonic interconnects. The second special session covers the evolution of wireless NOCs from planar deployments to 3D packages. The program also includes a tutorial on the OpenSOC fabric an open source infrastructure for synthesis of NOCs. A special thanks to Paul Gratz as the Chair for Special Sessions and Tutorials.

We are also privileged to have the technical program complemented by two keynote talks from leaders within the NOCs community. Mark Anders of Intel will deliver the first keynote covering the evolution and future challenges in the design of high performance, energy efficient NOCs. The second keynote will be delivered by Steve Furber from the University Manchester, wherein he will describe the work on SpinNNAker, the worlds largest NOC.

The NOCS 2014 best paper was selected through a two-step process. A five member subcommittee of the program committee first selected three nominees from the set of highest ranked papers. These nominees are identified in the technical program so attendees can be sure and attend these talks they represent the best of this years submissions. The full program committee then voted on the three nominees to select the best paper awardee. The best paper award will be announced and presented at the closing of the program.

We would like to thank our sponsors, specifically the IEEE Circuits and Systems Society, the Council for EDA, and the ACM Special Interest Groups on Computer Architecture (SIGARCH), Embedded Systems (SIGBED), and Design Automation (SIGDA). We also acknowledge direct financial sponsorship from Intel and from the EU-funded Multitherman project. Their generous support has made the continuation of this successful symposium possible.

Finally, we would like to give our special thanks to the following individuals: the symposium finance chairs Graziano Pravadelli and Franco Fummi for the time consuming task of overseeing the budget and finances; Maurizio Palesi for handling publicity and advertising; Carlo Galuzzi for managing the publication process; Riccardo Locatelli for seeking industrial donations; Chiara Ciampaglia for taking care of registration and payment; Marco Balboni and Andrea Bartolini for setting up and maintaining the web pages; again Marco Balboni and Luca Ramini for taking care of local arrangements. Thanks also to Jens Sparso and Flemming Stassen for their helpful suggestions.

We wish you an exciting symposium and a pleasant stay in Ferrara.

Daive Bertozzi and Luca Benini, General Co-Chairs
Sudhakar Yalamanchili and Joerg Henkel, Program Co-Chairs