NOCS 2020 Conference Close Report

The 14th IEEE/ACM International Symposium on Networks-on-Chip (NOCS) was held virtually on Sept 24-25, 2020, co-located with the 2020 Embedded Systems Week (ESWEEK). NOCS is the premier event dedicated to interdisciplinary research on on-chip, package-scale, chip-to-chip, and rack-scale communication technology, architecture, design methods, applications and systems. NOCS brings together scientists and engineers working on innovations and applications from inter-related research communities, including discrete optimization and algorithms, computer architecture, networking, circuits and systems, packaging, embedded systems, and design automation. Similar to the previous year, 2020 edition of NOCS was also co-located with the 2020 Embedded Systems Week (ESWEEK). ESWEEK is the premier event with a focus on the various aspects of embedded systems and software. The co-location with relevant ESWEEK conferences and workshops will create more synergy and opportunities for the benefit of all participants.

Unfortunately, given the COVID-19 circumstance, ESWEEK and NOCS went to the virtual format for 2020. This year NOCS received 17 complete submissions. The double-blind paper selection process was rigorously performed by the technical program committee (TPC) comprising of 34 experts in the area. In the first phase, each paper was assigned to four TPC members. After the review period, the online discussion phase was done to discuss each and, in the end, 6 papers were accepted (35% acceptance rate). In addition to the 6 regular papers, the conference also included 3 short papers.

The NOCS 2020 included two keynotes by experts in the field of interconnection networks. The first keynote was presented by Jose Duato (Universitat Politècnica de València) on the network congestion in interconnection networks and datacenters. The second keynote was given by Dennis Abts (Groq) on the domain specific networks for machine learning on the Groq tensor streaming processor (TSP). The conference program also included two special sessions. The first special session entitled "Unlock the NoC: Transforming NoC Research with Physical Design Awareness" presented physical design challenges in NoC research and how to scale NoC by properly exploiting the VLSI technology. The second special session entitled "Scalable Platforms for Machine Learning: An Industry Perspective" provided an industrial perspective on designing scalable platforms for machine learning.