22nd ACM/IEEE International Workshop on System-Level Interconnect Problems and Pathfinding (SLIP^2)

www.SLIPonline.org

Co-located with ACM/IEEE Intl. Conf. on Computer-Aided Design

November 5, 2020

San Diego, California, USA

Co-sponsored by ACM SIGDA and the IEEE CEDA (pending)

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The technical goal of the workshop is to (1) identify fundamental problems, and (2) foster new pathfinding of design, analysis, and optimization of interconnect and communication fabrics in electronic systems. **Special emphases this year are predictive system interconnect modeling technologies, and novel interconnect technologies and architectures for a beyond-Moore era.** Further, a more interactive, workshop-like tone and format - recalling earlier editions of the SLIP workshop - is a goal for SLIP^2 this year.

Technical topics include but are not limited to:

- Learning and predictive models for interconnect at various IC and system design stages
- Roadmapping and pathfinding of interconnect technology and architectures
- Roadmapping and pathfinding of chip-to-chip interconnect, chiplets, and chip-package interfaces
- System-level design for FPGAs, NoCs, reconfigurable systems
- 2.5D and 3D-integrated system interconnect optimization, projection and pathfinding
- Design, analysis, and (co)optimization of power and clock distribution networks
- Topologies and fabrics of multi- and many-core architectures
- Predictive models for power and performance of system-level interconnects
- Interconnects in social, genetic, and biological systems
- Interconnects in complex networks and high-performance computing
- Interconnects in quantum architectures
- System-level interconnect reliability, aging, thermal, yield and cost issues
- Bio-inspired connectionist systems, such as artificial neural networks

Format:
The workshop includes keynotes, regular paper sessions, interactive panels, tutorials, invited talks, and interactive poster sessions.

Keynote Talks:
- *Outlook of device and assembly technologies enabling high-performance mobile computing* by Dr. Mustafa Badaroglu (Qualcomm)
- *Wafer Scale Interconnect and Pathfinding for Machine Learning Hardware* by Dr. Patrick Groeneveld (Cerebras Systems)

Student Awards:
Student Awards may be available. Please check the website for more information.

Submission:
We invite authors to submit papers of 4 to 8 pages, double-columned, 9pt or 10pt font in ACM proceedings format available at https://www.acm.org/publications/proceedings-template

To permit double blind review, all papers must remove author information. Authors should submit papers electronically: https://easychair.org/conferences/?conf=slip2

Important Dates:
Abstract Registration: September 26, 2020
Paper Submission: October 3, 2020
Author Notification: October 24, 2020
Final Version Upload: November 3, 2020