Recent Circuit Advances for Resilience to Side-Channel Attacks

Kenny C. H. Hsieh

Fundamentals of Circuit Design for 2.5D/3D Integration

Giuseppe Gramegna,
Salvatore Levantino,
Calibration Techniques in PLLs

Violante Moschiano,
Future Developments

3D Flash Memory from Technology to the System: Past, Present and Arijit Raychowdhury,
Sophia Shao,
Shanthi Pavan,
Fundamentals of Power Management Systems: Constraints and Solutions

Minkyu Je,
Process-Scalable Low-Power Amplifiers

Circuits and Systems

Recent Developments in High-Performance Frequency Synthesis

Intelligent Sensing

Energy-efficient AI-computing Systems for Large-language Models

Efficient Chiplets and Die-to-Die Communications

With the emergence of machine learning and generative AI, many types of jobs are being transformed by GPT-based tools. Large Language Models are starting to be used for education and can be used to contribute to publications, and AI is being embedded into EDA tools. Join this evening panel with experts from industry and academia to discuss how generative AI or AI in general will change IC design.

Demonstration Sessions

Technical Sessions

Short Course

Machine Learning Hardware: Considerations and Accelerator Approaches

Introduction to Machine Learning Applications and Hardware-Aware Optimizations

Ranghajan Venkatesan, Nvidia

Architecture and Design Approaches to ML Hardware Acceleration: Performance Compute Environment

Leland Chang, IBM Research

Architecture and Design Approaches to ML Hardware Acceleration: Edge and Mobile Environments

Marian Verhelst, KU Leuven

Emerging ML Accelerator Approaches: In-memory Computing Architectures

Nareesh Shanbhag, UIUC