Advances in Digital vs. Analog AI Accelerators and Circuits
Basics of Equalization Techniques: Channels, Equalization, Bodhisatwa Sadhu, Sriram R. Vangal, Nodes
Dong Uk Lee, HBM DRAM and 3D Stacked Memory Mehdi Kiani, Wireless Power Transfer and Management for Medical Applications Eric J.-W. Fang, Design Fundamentals of Process Monitors for Signoff-Oriented Circuit Noise-Shaping SAR ADCs Kousuke Miyaji, Noise-Shaping SAR ADCs Yun-Shiang Shyu, Kodak, Hsinchu City, Taiwan
Shihshartha Das, Arm, Cambridge, United Kingdom
Fundamentals of Process Monitors for Signoff-Oriented Circuit Design Eric J.-W. Fang, MediaTek, Hsinchu City, Taiwan
Fundamentals of Mixed-mode RF Transceivers Jeff Walling, Virginia Tech, Blacksburg, VA
Wireless Power Transfer and Management for Medical Applications Mehdi Kiani, The Pennsylvania State University, University Park, PA
HBM DRAM and 3D Stacked Memory Dong Uk Lee, SK hynix, Icheon, Korea

Tutorials
Analog Circuit Design in Bipolar-CMOS-DMOS (BCD) Technologies Marco Berkhouit, Goodix Technology, Nijmegen, The Netherlands
Fundamentals of High Frequency DC-DC Converters Koussuke Miyaji, Shizuoka Institute of Technology, Nagano, Japan
Noise-Shaping SAR ADCs Yun-Shiang Shyu, MediaTek, Hsinchu City, Taiwan
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Career, Research, and Industrial Opportunities
Two invited industry tracks will highlight recent hot-product releases and discuss innovative ways they solved product-level challenges. The focus this year is on Digital/ML, Systems and Quantum Computing.

Invited Industry Track
The Next Trillion-Dollar Market for Chips
This panel assembles a collection of experts in various domains to give their view on what will be the next trillion-dollar market driver for chips. Will it be in artificial intelligence? Automation? AI-driven learning? Quantum computing? Optical? Space exploration? The experts in the panel will discuss the challenges and opportunities for growth in multiple potentially large sectors for the semiconductor industry.

The Bright and Dark Side of AI
Hope aside, AI is currently an emerging two-headed monster. This evening panel of AI experts could provide insights on both sides of the AI coin – the bright and dark sides. The goal is to help stimulate a multi-stakeholder AI dialogue, gather views from panels and reflect on transformative ideas with an eye on safety and risk management. What is the golden vision for futuristic AI platforms? What are compelling AI use cases and where are the risks? For instance, AI holds a list of promises for cybersecurity and human-centric robots. However, these sectors also have some of the highest potential for failure. AI’s dark side capability should not be underestimated.

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