



ISSCC 2026

ADVANCING AI WITH IC & SoC INNOVATIONS

February 15-19, 2026 | San Francisco Marriott Marquis | San Francisco, California, USA

Plenary Talks

Advancing Horizons for AI: Perspectives on Semiconductor Innovations



Rick Tsai
MediaTek

Vice Chairman / CEO

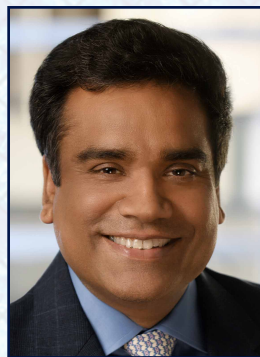
Quantum Computing – Toward Large-Scale Fault-Tolerant Quantum Computing



Heike Riel
IBM Research

*IBM Fellow / Head of Science of Quantum
& Information Technologies*

Powering the AI Supercycle: Design for AI and AI for Design



Anirudh Devgan
Cadence Design Systems

President / CEO

Empowering the Next Wave of Silicon Engineers



Hope Giles
Apple

*Vice President, Hardware Technologies Program
Management and Infrastructure*

Tutorials

Fundamentals of Energy-Efficient LDO Regulator Designs

Hyun-Sik Kim, *KAIST, Daejeon, Korea*

Fundamentals of Post-Quantum Cryptography for Chip Architects

Thomas Poeppelmann, *Infineon Technologies, Neubiberg, Germany*

Design Techniques for Robust and Energy-Efficient Biomedical Interface System

Taekwang Jang, *ETH Zurich, Zurich, Switzerland*

Fundamentals of Compute-in-Memory: From System to Circuits

Jaydeep Kulkarni, *The University of Texas at Austin, Austin, TX*

Fundamentals of Image Sensors: From Photon to Image

Min-Woong Seo, *Samsung Electronics, Hwaseong, Korea*

Principles and Practices of High-Speed Digital-to-Analog Converter Design

Shiyu Su, *University of Waterloo, Waterloo, Canada*

Memory and Digital Circuit Design in Technologies Beyond FinFET

Zheng Guo, *Intel, Portland, OR*

Interference Mitigation Techniques in Wireless Communication Systems

Negar Reiskarimian, *Massachusetts Institute of Technology, Cambridge, MA*

Clocking and CDR Techniques for High-Performance Wireline Transceiver

Wei-Zen Chen, *National Yang Ming Chiao Tung University, Hsinchu, Taiwan*

Doherty Power Amplifier: Fundamentals and Recent Advances

Taiyun Chi, *Rice University, Houston, TX*

Forums

Power Efficient Circuits and Systems for Next-Gen Agentic AI and Robotics

Electrical and Optical Links Towards 400G+ Connectivity

Powering the Future of AI, HPC, and Chiplet Architectures: From Dies to Package and Rack

The Race for 6G FR3 (7-24GHz): From Network Deployment to System Integration and Breakthrough Technology

Analog for AI and AI for Analog: What the Analog/RF People Can Do and Leverage in the AI Era

Calibration and Dynamic Matching Techniques for High-Performance Data Converters

Student Activities

Student Research Preview (SRP): Short Presentations w/ Poster Session
Silkroad Award: Scholarships awarded for APAC full-time students

Invited Industry Track

The industry track will highlight the latest leading-edge commercial chips and systems, and present product-level challenges and innovative solutions for AI training and inference across edge, client and cloud datacenter platforms.

Innovation Sessions

To promote continued innovation, there will be an invited session by renowned experts in their respective fields on topics beyond conventional areas covered in solid-state circuits with potential to open up new avenues for IC R&D. This special session (organized by Technology Directions) will cover exciting topics ranging from new device technologies to robotics and healthcare. Regular paper submissions on innovative work outside of traditional focus areas, with potential impact on the solid-state circuits society, are highly encouraged.

Evening Events

Generative AI for Silicon Design:

Mastering Complexity, Democratizing Design, and Building Trust

Generative AI is rapidly transforming chip design, enabling automation in circuit synthesis, layout, and verification. These advancements promise greater efficiency, but also raise critical questions: What are the fundamental limits of AI-driven automation? Can AI truly match human intuition and creativity? And will it democratize or centralize chip design in the long run? To explore these questions, join us for an engaging evening event featuring a panel of experts at the forefront of AI and VLSI design and an interactive game where we see how far AI in VLSI has come. Through a mix of real-world challenges, live audience interaction, and expert commentary, we'll assess where we are with GenAI in chip design and where we're heading.

The Augmented Human -

Will Chips in Our Brain Enhance Our Cognitive Abilities?

Can the brain of the future be enhanced with semiconductor technologies? As we deepen our understanding of neural function and continue to miniaturize and integrate advanced electronics, exciting possibilities emerge, such as expanding cognitive capacity through implanted memory, enhancing our vision to unseen wavelengths through visual prostheses, or accelerating thought processes with integrated computational support akin to a co-processor for the brain. While these ideas may lie far beyond current capabilities, this session invites visionary thinkers and cross-disciplinary experts to examine the scientific, technological, and ethical foundations of such a future.

Demonstration Sessions

Exhibitions

The expanding exhibit program offers access and networking opportunities with decision-makers and technical influencers at all levels of the semiconductor design ecosystem. Connect with the unique and visionary conference attendees at ISSCC to share and discuss the latest advances in your technology, design automation and products. See <https://submissions.mirasmart.com/ISSCC2026/ExhibitRequest.aspx>

Technical Sessions

Short Course

Circuits for Optical Subsystems: Communications and Beyond

Introduction to Optical Communication Systems: From VCSELs to Photonics to Coherent Solutions

Peter Ossieur, *IMEC*

VCSEL-Based Solutions: Components, Circuits, and Integration

Enrico Temporiti, *Marvell*

Silicon Photonics-Based Solutions: Components, Circuits, and Integration

Firooz Aflatouni, *University of Pennsylvania*

Emerging Optical Applications and Circuit Approaches

Ali Hajimiri, *California Institute of Technology*



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