

# ISSCC Short Courses and Tutorials Collection

## Available via the IEEE Xplore Digital Library

The **ISSCC Short Courses and Tutorials Collection** offers an in-depth learning experience on specific topics such as wireless communications, artificial intelligence, circuits and systems, and more, all hosted by industry-leading experts. A subscription gives access to 200+ videos, including short courses and tutorials that date back to 2011.

**Short Courses:** These courses will target experienced designers who wish to explore a new subject area in depth. Each short course will take approximately 1.5 hours.

### *2025 Short Course: Advances in Wireless and RF Transceiver Circuits*

- Evolution of CMOS Radio Architectures
- Multi-Antenna Radio Systems: MIMO and Phased Arrays
- Mixer-First and N-Path Architectures, Applications, and Research Directions
- Transmitters: Power Amplifiers and Digitally Assisted RF

**Tutorials:** Each year, IEEE offers approximately 10 tutorials on different topics, presenting each topic's basic concepts and working principles. These tutorials are intended for non-experts, graduate students, and practicing engineers who wish to explore and understand a new topic. Each tutorial will take, on average, approximately 1.5 hours to complete.

### *2025 ISSCC Tutorials*

- Low-Noise Current Sensing
- Fundamentals of DRAM I/O: Standards and Circuits
- Fundamentals of Cryo-CMOS Circuits and Systems for Quantum Computing
- Fundamental Circuits for Nanopower and Energy Harvesting Applications
- Fundamentals of RF System Analysis for IC Designers
- Front-End Circuit Design for High-Speed Optical Transceivers
- High-Speed Analog-to-Digital Converters
- Intelligent Neural Interfaces: Fundamentals and Future Directions
- Generative AI on Edge Devices: Models, Hardware, and Systems
- mm-Wave Oscillator Design

\*Customers will receive access to published ISSCC short courses and tutorials from the current year, dating back to 2011, that are currently available in the IEEE Xplore Digital Library. Please note that some content from various years may not be available in IEEE Xplore. Customers will receive a cataloged list of all short courses and tutorials currently included in the collection.

### **About the Conference:**

The International Solid-State Circuits Conference (ISSCC) is the foremost global forum for presenting advances in solid-state circuits and systems-on-a-chip.

### **Features, Benefits, and Value**

- Offers background information, a review of the basics in specific circuit and system-design topics, and a series of application-specific courses on leading-edge topics such as quantum computing and machine learning/artificial intelligence.
- It offers a unique opportunity for engineers working at the cutting edge of IC design to maintain technical currency.
- Supports workforce development in the semiconductor design market.
- Provides affordable, on-demand training for all members of an institution.

For pricing, contact an [IEEE Sales Representative](#).

### **Contact us for more information**

[ieeexplore@ieee.org](mailto:ieeexplore@ieee.org) | [innovate.ieee.org/isscc-tutorials/](https://innovate.ieee.org/isscc-tutorials/)  
IEEE ISSCC Short Courses and Tutorials Collection