

**Educational Sessions
Sunday, April 8**

Educational Session 1: Data Converter Circuits

Room: Great Room 1-3

Chair: Nan Sun, UT Austin, **Co-Chair:** Y. Dong, Analog Devices

ES1-1

8:30 - 10:00 am

Practical Design and Simulation Techniques for Continuous-time Delta-Sigma ADCs, Prof. Shanthi Pavan, IIT Madras

ES1-2

10:30 - 12:00 pm

Time Interleaved ADCs: Requirements vs. Application, Dr. Aaron Buchwald, InPhi Corp

ES1-3

1:00 - 2:30 pm

Evolutions of SAR ADC: increasing footprints from high resolution to high speed regime, Prof. Mike Chen, USC

ES1-4

3:00 - 4:30 pm

High-speed pipelined ADCs: Fundamentals and variants, Dr. Ahmed M. A. Ali, Analog Devices

Educational Session 2: Clocking Circuits

Room: Great Room 4

Chair: W. Rhee, Tsinghua University

Co-Chair: Farhana Sheikh, Intel Labs

ES2-1

8:30 - 10:00 am

Frequency synthesizers for mm-wave, Prof. Payam Heydari, UC Irvine

ES2-2

10:30 - 12:00 pm

Digital Phase-Locked Loops, Prof. S. Levantino, Politecnico Di Milano

ES2-3

1:00 - 2:30 pm

Hybrid PLL Architectures and Implementations, Dr. Daniel Friedman, IBM TJ Watson

ES2-4

3:00 - 4:30 pm

Clock-and-Data Recovery Systems, Dr. Fulvio Spagna, Intel Corp

Educational Session 3: Millimeter-Wave Circuits

Room: Great Room 5

Chair: Jorge Grilo, Maxlinear

Co-Chair: Swami Sankaran, TI

ES3-1

8:30 - 10:00 am

Millimeter-wave Phased Array Circuits and Systems for 5G, Dr. Samet Zahir , IDT

ES3-2

10:30 - 12:00 pm

High-Performance Millimeter-Wave Beamformers with Built-In Self-Test, Prof. Brian Floyd, NC State University

ES3-3

1:00 - 2:30 pm

Frequency Generation and Signal Processing for mmW Radars, Mr. Sreekiran Samala, Texas Instruments

ES3-4

3:00 - 4:30 pm

To be announced

Education Session 4: Low Power IOT

Room: Great Room 6-8

Chair: Yanjie Jay Wang, Intel Labs

Co-Chair: Debo Chowdhury, Broadcomm

ES4-1

8:30 - 10:00 am

Low Power Wake-up Radio Receiver, Dr. Erkan Alpman, Intel Labs

ES4-2

10:30 - 12:00 pm

Wireless powering for Ultra Low Power Batteryless IoT Sensing and Communication, Prof. Arun Natarajan, OSU,

ES4-3

1:00 - 2:30 pm

Design of Low-Power Wake-up Radios for IoT Applications, Prof. Patrick Mercier, UC at San Diego

ES4-4

3:00 - 4:30 pm

Ultra Low-Power Transceiver SoC Designs for IoT,NB-IoT Applications, Prof. Ali Niknejad/Dr. O.Khan, UC Berkeley