

Cadence Virtuoso & NI AWR Microwave Office Workshop

September 26, 2016 - October 6, 2016 (4 days a week)

Meeting called by Assoc. Prof. Dr. Serkan Topaloğlu

Attendees: Anil Özdemirli, Erol Asıg, Ali Arda Yıldız, Ali Baran Dursun

Guests: Ömer Orberk (Analog IC Design Engineer at Dialog Semiconductor), more will be announced.

Location: Simulation Laboratory

cādence™

September 26, 2016

18:30 – 21:00

- Introduction to Cadence, Library Manager, Analog Design Environment, Schematic Entry
- Analysis types on simple resistive network and RC filter
 - Operating point analysis, DC Sweep, AC Sweep, Transient Analysis
- Introducing diode model, its equivalent circuit
- Extracting V-I curve, C-V curve of a diode
- Diode clipping and clamping circuits
 - An example: Charge Pump; improved version of clipping circuit

September 27, 2016

18:30 – 21:00

- Introducing OPAMP model, its equivalent circuit
- Open-Loop Response of a practical OPAMP (DC Gain, GBW, etc.)
- Basic Closed-Loop Applications with Split Supply and Single Supply Configuration
 - Extracting, DC Operating Point Parameters, Loop Gain, Phase Margin, Slew Rate

September 28, 2016

18:30 – 21:00

- Introducing discrete MOSFET model, its small-signal equivalent circuit
- Extracting basic characteristic curves of a MOSFET
- An analysis Example: Common Source Amplifier
 - DC Operating Point, Midband Gain, Transient Results

September 29, 2016

18:30 – 21:00

- Introducing parametrized MOSFETs in different CMOS libraries (TSMC, UMC, XFAB etc.)
- Design Example: Designing a Common-Source Amplifier with given specs using CMOS library



October 3, 2016

18:30 – 21:00

- Introduction to AWR, Building Circuits, Optimization, EM Simulations, Wizards
- iFilter Filter Synthesis Wizard
- Analyzing a circuit, S-Parameter simulations, Tuning

October 4, 2016

18:30 – 21:00

- EM Structures, EM Simulations, Meshing
- Simple EM Example

October 5, 2016

18:30 – 21:00

- Circuit optimization, Optimization Methods, Goals
- Simple Optimization Example

October 6, 2016

18:30 – 21:00

- RFIC Design Flow

**If you want to attend this workshop, please contact
with Anil Özdemirli via his e-mail;
anil.ozdemirli@yeditepe.edu.tr**