

Two days workshop on VLSI Analog and Mixed signal design

Tentative dates: 22 and 23 Jan 2016

Speaker	Topic	Contents
FIRST DAY		
Session1 – 9.30 to 11.15 am		
Dr. Cyril Prasanna	Analog fundamentals	CMOS-OPAMP-OTA fundamentals
Break 11.15 to 11.45 am		
Session2 – 11.45 am to 1.30 pm		
Dr. Ananda Mohan	Analog filters	1) Fundamentals of filter design. 2) Design methodologies such as Active RC filters, OTA-C filters, Current-mode filters, Switched capacitor filters. 3) Effect of non-ideal passive and active components such as tolerances of components.
Lunch Break 1.30 pm to 2.00 pm		
Session3 – 2 to 3.30 pm		
Dr. Ananda Mohan	Analog filters	4) Finite gain, bandwidth of active devices, noise of passive and active devices, offset of active devices, parasitics due to interconnections as well as inherent parasitics. 5) Design choices for low power supply voltage designs. 6) Recent trends in filter design for various mobile devices using GSM, CDMA.W-CDMA, Bluetooth technologies etc. 7) Design of other analog building blocks such as current sources, voltage references, A/D converters, D/A converters and especially Sigma delta converters of both discrete-time and continuous time types.
Break 3.30 to 4.00 pm		
Session4 – 4.00 to 5.30 pm		
Lab session		SPICE analysis of various circuits - LT Spice
SECOND DAY		
Session1 – 9.30 to 11.15 am		
Dr. KRK Rao	PLL Design	
Break 11.15 to 11.45 am		
Session2 – 11.45 am to 1.30 pm		
Dr. Pinjare	Analog layout	
Lunch Break 1.30 pm to 2.00 pm		
Session3 – 2.00 to 3.00 pm		
Dr. Sarat Chandra Babu	Analog Fault diagnosis	
Session4 – 3.00 to 4.00 pm		
TBD	RF CMOS	
Break 4.00 to 4.30 pm		
Session5 – 4.30 to 6.00 pm		
Lab session		SPICE analysis of various circuits - LT Spice
Conclusion		