



**MEAD** Education S.A.

# Practical PLL Design for Frequency Synthesis and Clocking

**EPFL, LAUSANNE, SWITZERLAND  
JUNE 20-24, 2016**

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## **MONDAY, June 20**

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8:30-10:00 am	Basic Concepts of PLLs	Michiel Steyaert
10:30-12:00 am	VCO Design	Ali Hajimiri
1:30 -5:00 pm	Jitter and Phase Noise in PLLs	Ali Hajimiri

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## **TUESDAY, June 21**

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8:30-10:00 am	Interference Effects in PLLs	Michiel Steyaert
10:30-12:00 am & 1:30-3:00 pm	Integrated VCOs and Synthesizers	Michiel Steyaert
3:30-5:00 pm	Crystal Oscillators	Michiel Steyaert

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## **WEDNESDAY, June 22**

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8:30-12:00 am	Fractional N-PLLs for Frequency Synthesis	Ian Galton
1:30-5:00 pm	All-Digital PLL Architecture and Implementation	Bogdan Staszewski

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## **THURSDAY, June 23**

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8:30-10:00 am	Digitally Controlled Oscillator (DCO)	Bogdan Staszewski
10:30-12:00 am	Time-to-Digital Converter (TDC)	Bogdan Staszewski
1:30-3:00 pm	FDC-Based Digital PLLs	Ian Galton
3:30-5:00 pm	Case Study of a Wide Operating Range DPLL with Bandwidth Tracking	Pavan Hanumolu

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## **FRIDAY, June 24**

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8:30-10:00 am	Supply Noise Mitigation Techniques in PLLs	Pavan Hanumolu
10:30-12:00 am	Digital Multiplying Delay-Locked Loops	Pavan Hanumolu
1:30 - 3:00 pm	Injection-Locked Clock Multipliers	Pavan Hanumolu

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