EPFL

MICRO-720 **Techniques for Handling Noise and Variability in Analog Circuits**

Kayal Maher

Cursus	Sem.	Type
Microsystems and Microelectronics		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Written
Workload	60h
Hours	**33**
Courses	33
Number of positions	

Frequency

Every year

Remark

Week 1 : January 18 to 22, 2021 Week 2 : January 25 to 29, 2022

Summary

Fundamentals of Noise in Electronic Devices, Random Mismatch Origins, Noise Analysis in Continuous-Time and Sampled-Data Circuits, Analyzing Mismatch and Yield in Analog Circuits, Noise Cancellation Techniques, Noise Sampling in Switched Capacitor Filters, Offset, CMRR and PSRR.

Content

1. Fundamentals of Noise in Electronic Devices
2. Random Mismatch Origins
3. Noise Analysis in Continuous-Time and Sampled-Data Circuits
4. Analyzing Mismatch and Yield in Analog Circuits
5. Noise Cancellation Techniques
6. Noise Sampling in Switched Capacitor Filters
7. Offset, CMRR and PSRR.

Keywords

Analog Circuit, Noise, Electronic Devices, Continuous-Time, Sampled-Data, Switched Capacitor Filter, CMRR and PSRR.

Learning Prerequisites

Required courses

Analog circuits design I & II

Resources

Websites

• http://mead.ch/MEADNEW/techniques-for-handling-noise-and-variability-in-analog-circuits/