**Frequency**
Every year

**Remarque**
August 26 to 30, 2019

**Summary**
The objective of this course is to discuss the state-of-the-art in low-power analog and digital system design, with special emphasis on transistor level measures to limit and to control the power dissipation of portable systems.

**Content**
1. DC-DC Converters, Topologies & Control Techniques
2. Converter Modeling and Feedback Loop Design
3. Microprocessor Power Supplies
4. Switched-Capacitor Power Supplies
5. CMOS Linear Regulators, Design and Case Studies
6. Bandgap References
7. Alternative Bandgaps and Applications
8. Battery Charging Techniques & Circuits for Notebook Computers & Cellular Phones
9. Transistor-Level Off-line DC-DC Controller Design
10. Circuit Techniques for Integrated Switching
11. Regulators

**Note**
* Organized by MEAD/EPFL
More informations & registration at:
http://mead.ch/MEADNEW/power-management/
Contact: education@mead.ch

**Keywords**
DC-DC Converters, Power Supplies, Bandgap References

**Learning Prerequisites**
Required courses
Basic electronic circuits
Ressources en bibliothèque

- Methodology for the Digital Calibration of Analog Circuits & Systems / Kayal
- Charge-Based MOS Transistor Modeling: The EKV Model for Low-Power and RF IC Design / Enz
- All-Digital Frequency Synthesizer in Deep-Submicron CMOS / Staszewski
- Understanding Delta-Sigma Data Converters / Pavan
- RF analog impairments modeling for communication systems simulation : application to OFDM-based transceivers / Smaini
- Analog Design Essentials / Sansen
- Structured Analog CMOS Design / Kayal
- Understanding delta-sigma data converters / Schreier
- Analog-to-Digital Conversion / Pelgrom