

ELEN0037

Microelectronics and IC

Design

Prof. Dr. Michael Kraft



Lecture 0:

Introduction and Curriculum

- Lecturer: Michael Kraft
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- Teaching Assistant: Thomas Schmitz
- Time/Location Wednesday: 14:00 – 18:00, B28 1.21
- Format: 2 h lecture, 2 h tutorial
- Textbooks
 - Johns and Martin, “Analog Integrated Circuit Design”, Wiley, ISBN 978-0-470-77010-8
 - Weste and Harris, „CMOS VLSI Design“, Pearson, ISBN 10: 0-321-54774-8

Module Overview

- Lecture 1: History and Market of Integrated Microelectronics
- Lecture 2: Revision: Basic MOSFET Operation and Modelling
- Lecture 3: Technology and Passive Components
- Lecture 4: Sample and Hold Circuits
- Lecture 5: Switched Capacitor Circuits
- Lecture 6: Filters
- Lecture 7: Data Conversion
- Lecture 8: Noise
- Lecture 9: Digital Design Methods I
- Lecture 10: Digital Design Methods II
- Lecture 11: Standard Cells I
- Lecture 12: Standard Cells II
- Lecture 13: Chip Layout
- Lecture 14: Revision
- Lecture 15: tba / Back-up