

Lecture Content and Schedule

Integrated Circuits for Broadband Communications

- F. Ellinger, 26.08.2022, modifications possible, please check regularly
- Change of dates for tutorials may be possible according to preferences of students if ok for tutors
- On Fridays, lectures and tutorials (1. and 2. DS) will be held in the room GÖR/0226/H
- On Tuesdays (5. DS), lectures and tutorials will be held in the room GÖR/127/U
- Please bring your portable personal computer (PC) to lab tutorial sessions
- Assistants & tutors: Mengqi Cui (C, mengqi.cui@tu-dresden.de), Seyyedmohsen Seyyedrezaei (S, seyyedmohsen.seyyedrezaei@tu-dresden.de)

Lectures			Tutorials			
No	Date	Content	No (min)	Date	Content	Res
1	11.10.22 (5. DS)	0. Prelude (12/12) 1. Apps, standards & Technol. (9/12)				
2	14.10.22 (1. DS)	2. System considerations (26/29)				
3	14.10.22 (2. DS)	3. Optical devices (26/34)				
4	21.10.22 (1. DS)	3. Optical devices (continued) 4. Transimpedance amplifiers (66+/104)				
5	21.10.22 (2. DS)	4. Transimpedance amplifiers (continued)	1 (90)	25.10.22 (5. DS)	<i>ICBC theory tutorial I: System considerations</i>	C
6	28.10.22 (1. DS)	4. Transimpedance amplifiers (continued)				
7	28.10.22 (2. DS)	5. Limiters and buffers (32/34)				
			2 (90)	08.11.22 (5. DS)	<i>ICBC theory tutorial II: Common Stage Topologies (part I)</i>	S
8	11.11.22 (1. DS)	6. Laser drivers (22/25)				
9	11.11.22 (2. DS)	7. Voltage controlled oscillators (51/74)	3 (90)	15.11.22 (5. DS)	<i>ICBC theory tutorial II: Common Stage Topologies (part II)</i>	S
10	18.11.22 (1. DS)	7. Voltage controlled oscillators (continued)				
11	18.11.22 (2. DS)	8. Phase locked loops and synthesizers (37/47)	4 (90)	22.11.22 (5. DS)	<i>ICBC lab tutorial 1: Initial Step For Start, Circuit simulation in LTspice</i>	S
			5-6 (180)	25.11.22 (1.-2. DS)	<i>ICBC lab tutorial 2: Simulation of Common-Source Amplifiers</i>	S
			7-8 (180)	02.12.22 (1.-2. DS)	<i>ICBC lab tutorial 3: Simulation of Further Amplifiers</i>	S
12	09.12.22 (1. DS)	8. Phase locked loops and synthesizers (continued)				
13	09.12.22 (2. DS)	9. Clock data recovery (49/57)				
			9-10 (180)	06.01.23 (1.-2. DS)	<i>ICBC lab tutorial 4: Quadrature Phase Ring Oscillator</i>	C
14	13.01.23 (1. DS)	9. Clock data recovery (continued)				
15	13.01.23 (2. DS)	10. Multiplexer and demultiplexer (16/19)	11 (90)	17.01.23 (5. DS)	<i>ICBC theory tutorial III: Phase-Locked Loop</i>	C
			12-13 (180)	20.01.23 (1.-2. DS)	<i>ICBC lab tutorial 5: Phase detector</i>	C
16	27.01.23 (1. DS)	11. Frequency dividers (20/24) 12. Transceiver implementation examples (6/8)				
17	27.1.23 (2. DS)	13. Chip design procedure (11/12) 14. Conclusions (6/6)	14 (90)	31.01.23 (5. DS)	Open questions	C, S