

## Embedded Computer Architecture

5SIA0

2019-2020 Lectures: Monday 3,4 (Flux 1.02) and Wednesday 9,10 (Auditorium 2)

Teacher: Henk Corporaal

Teaching assistants: Patrick Wijnings, Sun Wei, Ali Banagozar

Guest lectures: Maurice Peemen, Gert-Jan vd Braak

### Tentative schedule

Date	Topic	Material	Assignments + Remarks
11 Nov	Course overview + Introduction	Ch 1	
13 Nov	<a href="#">CGRA and Accelerators: Mark Wijtvliet</a>		<a href="#">CGRA lab1 &lt; Dec 8</a>
18 Nov	Processor Architectures - 1	Ch 3	
20 Nov	Processor Architectures - 2	Ch 3	
25 Nov	Technology Impact	Ch 2	<a href="#">GEM5 multiproc. lab3 &lt; Jan 3</a>
27 Nov	<a href="#">GPU / SIMD: Gert-Jan van den Braak (Philips Medical Systems)</a>	Ch 4	
2 Dec	Memory hierarchy - 1	Ch 4	
4 Dec	Memory hierarchy - 2	Ch 4	<a href="#">GPU lab2 &lt; Jan 13 (Monday)</a>
9 Dec	Processor Architectures - 3	Ch 3	
11 Dec	Processor Architectures - 4 + TTAs	Ch 3	
16 Dec	GEM5+ Simulation + ARM, ILP measurement	Ch 3	
18 Dec	Loop transformation for Data Reuse		extended in compiler course 5LIMO
6 Jan	<a href="#">Deep Learning Neural Networks: Maurice Peemen (Thermo Fisher Scientific)</a>		extended in IA course, 5LIL0
8 Jan	Multiprocessor systems + Interconnection networks	Ch 5, 6	
13 Jan	Coherence, synchr. and consistency	Ch 7	
15 Jan	SMT: Simultaneous Multi-Threading + Wrap-up	Ch 8	