



# HARDWARE-EFFICIENT EDGE AI

ON-LINE CLASS on MS TEAMS

March 12-22, 2024

WEEK 1	MARCH 12-15			
WEEK 2	MARCH 18-22			
DAILY	Central European Time	Eastern Standard Time	Pacific Standard Time	India Standard Time
	CET (Lausanne)	EST (New York)	PST (California)	IST (India)
Module 1	3:00-4:30 pm	9:00-10:30 am	6:00-7:30 am	7:30-9:00 pm
Module 2	5:00-6:30 pm	11:00 am-12:30 pm	8:00-9:30 am	9:30-11:00 pm
WEEK 1	Module			
Tuesday, March 12	1	<b>Context:</b> ML Applications, Scenario's and Constraints for the Edge		Marian Verhelst, KU Leuven
	2	<b>Context:</b> ML Algorithms and Resulting Challenges		
Wednesday, March 13	1	<b>Algorithms:</b> Neural Network Compression for the Edge		Tijmen Blankevoort, Qualcomm
	2	<b>Algorithms:</b> Neural Network Quantization for the Edge		
Thursday, March 14	1	<b>HW, CPU:</b> Specializing Processors for ML		Luca Benini, ETHZ/Uni Bolgna
	2	<b>HW, CPU:</b> From Single to Multi-Core Low-Power SoCs for ML		
Friday, March 15	1	<b>HW, Digital:</b> Concepts Towards ML Acceleration		Marian Verhelst, KU Leuven
	2	<b>HW, Digital:</b> Exploiting Quantization and Sparsity at the HW Level		
WEEK 2	Module			
Monday, March 18	1	<b>HW, Analog:</b> Analog/Mixed-Signal Acceleration		Naveen Verma, Princeton
	2	<b>HW, Tech:</b> Architectural Integration of Emerging Compute Models and Technologies		
Tuesday, March 19	1	<b>Tools:</b> Accelerator Code Generation		Tobias Grosser, University of Cambridge
	2	<b>Tools:</b> Landscape of DL Compilers		
Wednesday, March 20	1	<b>Emerging ML Paradigms:</b> Neuro-Inspired Computing		Jan Rabaey, UC Berkeley
	2	<b>Emerging ML Paradigms:</b> Towards Cognitive Systems		
Thursday, March 21	1	<b>System:</b> Efficient Execution of Approximated AI Algorithms on Heterogeneous Edge AI Systems		David Atenza, EPFL
	2	<b>Use Cases:</b> Application-Driven System Design and Optimization flow of Edge AI Use Cases in Industrial and Medical Domains		
Friday, March 22	1	<b>Use Cases:</b> Energy Efficient ML Applications for Metaverse		Huichu Liu, Meta
	2	Cross-Layer Optimization		Marian Verhlest, KU Leuven