
UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

**PHD PROGRAM IN
INFORMATION AND TECHNOLOGY FOR HEALTH**

PHD PROGRAM IN INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Seminar announcement

Tuesday 30 June 2026, Time: 09:30 - 10:30

Seminar Room, Floor 1, Building 3, DIETI - Via Claudio, 21 - NAPOLI



Eng. Danilo Pietro Pau

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Micro-scale, Macro-Impact: un-plugging Generative AI from the Cloud

Abstract: The rapid evolution of Artificial Intelligence is reshaping the way intelligent systems are designed, deployed, and integrated into real-world applications. This seminar will explore the emerging trends and frontiers of Embedded AI and Edge Language Models, focusing on how advanced machine learning techniques are moving from cloud-based infrastructures toward resource-constrained edge devices. Attention will be given to the convergence between edge computing, neural processing units, model compression, quantization, and efficient inference engines, which enable AI models to operate directly on embedded

platforms with limited computational resources. The seminar will also discuss the transformative role of ELMs in embedded and cyber-physical systems, highlighting new paradigms such as on-device reasoning, physical AI, agentic AI, natural-language interfaces, autonomous decision support, and human-machine interaction. The seminar will address both the opportunities and the challenges associated with deploying Generative AI at the edge. Use cases from healthcare, industrial monitoring, robotics, wearable devices, and smart instrumentation will be considered to illustrate the practical impact of these technologies

Lecturer short bio: (Fellow, IEEE) received the B.S. and M.S. degrees in electronic engineering from the Politecnico di Milano, Italy, in 1992. In 1991, he joined the System Research and Applications Department, STMicroelectronics. He worked on Research and Development subjects, such as memory-reduced HDMAC and MPEG video decoding/coding/transcoding, embedded 3D and 2D graphics, and computer vision and deep learning. Since 2019, he has been an Industry Ambassador Member with the Action for Industry, the IEEE Region 8 South Europe. He is currently a Technical Director and a Fellow Member of Technical Staff. He is the Vice-Chair with the Task Force on Intelligent Cyber-Physical Systems, the IEEE Computational Intelligence Society.

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