



Progetto triennale di alta formazione in ambito culturale, economico e tecnologico ai sensi dell'art. 2 della legge regionale n. 25/2018 approvato con deliberazione di Giunta regionale n.1251/2019.

Seminar

“From Recurrent Neural Nets to Multimodal Transformers”

Prof. Roberto Paredes Palacios

Full Professor of Computer Science at the Universitat Politècnica de València

Monday, 17th March 2025 - 10:00-14:00

AULA P1.6 · Building MO25, Dipartimento di Ingegneria “Enzo Ferrari” ·
Via Vivarelli 10, 411125 (Modena)

ABSTRACT

Deep learning has revolutionized various domains, with Transformers emerging as the dominant architecture across NLP, vision, and multimodal tasks. This talk traces the evolution from recurrent neural networks (RNNs) and sequence-to-sequence models to attention mechanisms and the Transformer architecture, highlighting their impact on language and vision. We will then explore multimodal Transformers, showcasing their applications in healthcare, such as generating medical reports from images and visual question answering.

Biography: Roberto Paredes is a Full Professor of Computer Science at the Universitat Politècnica de València (UPV) and a leading researcher in deep learning, machine learning, pattern recognition, and biometrics, with a strong focus on computer vision and big data analysis. He was the founding Director of the PRHLT Research Center and President of AERFAI. As the co-founder and CTO of Solver Intelligent Analytics (SolverIA), he has played a pivotal role in transferring AI-driven technologies to industry, particularly in biometrics, fraud detection, and computer vision applications. His work has not only led to multiple international awards in computer vision challenges but has also been instrumental in advancing AI solutions in both academia and industry. Professor Paredes has been invited to prestigious institutions such as Google Zurich, BBVA Data & Analytics, and the University of Modena, delivering talks and courses that bridge cutting-edge AI research with real-world applications. With extensive experience in both academic research and industrial collaborations, he continues to push the boundaries of AI, making significant contributions to the field.

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