



**University of Pavia**

**Ph.D. School of Electrical and Electronics Engineering and Computer Science**

## **SEMINAR**

### **GenAI for the rest of us**

Luca Bianchi, PhD, CTO of Neosperience  
University of Pavia, Aula Magenta, Floor D  
January 16<sup>th</sup>, 2023 – from 9:00 to 13:00

#### **Summary:**

In recent years there has been a lot of interest in the capabilities of Artificial Intelligence (AI) to generate human-like content, exploiting wide context understanding capabilities. In this two-part seminar we will deep dive into Generative AI, exploiting techniques, models and use cases.

**09:15 – 11:00:** In the first part, we will address model evolution and different approaches that led to current state-of the art offering. We will explore available open and closed source Large Language Models (LLMs) with their specific skills, as well as tailored language models. Finally, we will deep dive into a common GenAI project lifecycle.

**11:15 – 13:00:** The second part of the seminar will be more hands on. Prompt engineering is introduced, as well as Parameter-Efficient Fine-Tuning (PEFT) techniques and model alignment. We will close the session with a deep dive discussion about Retrieval Augmented Generation (RAG) and agents.

#### **Bio:**

Luca Bianchi works on computer vision and deep learning since 2006, with focus on multi-processor architectures and parallel programming. Serving as Chief Technology Officer at Neosperience, he defines himself half software architect and half data scientist. Passionate about machine learning and serverless architectures, is founder of Serverless Meetup Italy and, since 2020, AWS Serverless Hero.

#### **Organizers**

Prof. Piercarlo Dondi  
Prof. Luca Lombardi

#### **Ph.D. Coordinator**

Prof. Ilaria Cristiani

Seminar in English

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