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Politecnico di Torino - Maxwell Room
30th November 2023 - 5.45 PM

Unleashing the Power of Edge Computing with In-Memory and Near-Memory Architectures

*Mr. **Michele Caon**, PhD Candidate, DET.*

The surge in the deployment of artificial intelligence on **edge devices** demands a shift in embedded computer architecture. This keynote explores the extension of existing microcontroller systems with **in-memory** and **near-memory computing** architectures to achieve significant performance and energy efficiency gains while retaining flexibility and low hardware and software overhead.

AI opens up new infinite possibilities and risks, but are we ready for all of this?

*Mr. **Farzad Nikfam**, PhD Candidate, DET.*

Artificial Intelligence (AI) is increasingly entering our everyday lives, bringing with it all the benefits and risks typical of Information Technology (IT). Are we truly ready and aware of the issues regarding our security and privacy? Together, we will try to explore some examples of the most significant **hidden risks** and examine current **defense techniques**.

Sleep Prediction utilizing commercial off-the-shelf wearable devices

*Mr. **Luigi Pugliese**, PhD Candidate, DAUIN.*

The NHTSA identifies drowsy driving as a major cause of fatal accidents akin to alcohol consumption. Our patented **sleep prediction method** utilizes wrist-worn **wearables** to monitor the **Autonomic Nervous System**, predicting alertness declines and enhancing road safety by analyzing Heart Rate and Heart Rate Variability during the transition to sleep.
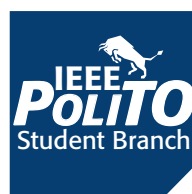
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