DOTTORATO DI RICERCA / PHD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Seminar announcement

Wednesday 8 April 2026, Time: 13:30 - 15:30
Room Aula Seminari, Floor 1st, Building 3, DIETI - Via Claudio, 21 - NAPOLI

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Trustworthy AI: The role of the Hardware

Abstract In the recent years, AI algorithms became so accurate that started to surpass human being in a wide range of tasks and are now currently used in applications that would be considered science-fiction only few years (months) ago. As AI advances across economies and societies, stakeholder communities are actively exploring how best to encourage the design, development, deployment and use of AI that is human-centered and trustworthy. Trustworthiness is a wide multi-disciplinary research field including mathematics and computer science for which the goal is to evaluate Fairness, Transparency, Explainability and Robustness of a given AI model knowing the data used for training and validation. However, one of the neglected aspects is the role of the hardware used to deploy the final application. Indeed, hardware is subject to external perturbations that can jeopardize the execution of AI workloads leading to misclassification and eventually to dramatic consequences when AI is used in safety-critical applications, such as autonomous driving. This talk will present the main hardware threats and discusses the main consequences on the choice of a given hardware architecture to achieve by design Trustworthiness.

Lecturer short bio: Alberto Bosio received his MSc (2003) and PhD (2006) in Computer Engineering in the area of digital systems dependability at the Politecnico di Torino (Italy). He is now a Full Professor at Ecole Centrale de Lyon, Institute of Nanotechnology (France). His research activities are related to the design and test of advanced digital circuits and systems. He served as committee and organizing member in several international conferences including DATE (Track Chair) and ETS (Program Chair) as well as guest and associate editors for many international journals. He is a member of the IEEE and the Vice-Chair of the European Test Technical Technology Council.

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