

UNIMORE

UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA



Venerdì 16 Dicembre 2022, ore 11.00-12.30
c/o edificio MO 25, Aula P1.1

Prof. Danilo Demarchi, Politecnico di Torino
terrà un seminario dal titolo

**“From micro-sensors to smart systems:
advanced electronics research supporting disruptive
innovation for the health and the agri-food applications”**

nell’ambito del corso di **Laurea Triennale e Magistrale in
Ingegneria Elettronica / Electronic Engineering**
e del **Corso di Dottorato di Ricerca in ICT**

Tutti gli interessati sono invitati a partecipare

Abstract: The goal of obtaining the best performance in terms of speed and dimensions drove electronic design in the last decades is no more unique. Electronic systems are nowadays applied in very different scenarios; often, speed is not important; power consumption and reliability are the keys, instead. New approaches should be researched to optimise interaction and information exchange from sensors to system. The system and the device are strictly related, and design choices should look at the system as a global entity to be optimised. A promising approach to this end is to take inspiration from biological systems, and to apply a merge of recently developed techniques for reaching the best tradeoff between quality, and so performances, and power consumption. The lecture will analyse Bio-Inspired Electronics solutions, namely concepts to exploit biological paradigms in system optimisation for Biomedical and Smart Agriculture applications.

Danilo Demarchi is Professor at Politecnico di Torino, Department of Electronics and Telecommunications. He leads the MiNES (Micro&Nano Electronic Systems - <http://mines.polito.it>) Laboratory of Politecnico di Torino and coordinates the Italian Institute of Technology Microelectronics group at Politecnico di Torino (IIT@DET). He is author and co-author of more than 300 scientific publications in international journals and peer-reviewed conference proceedings and 5 patents. He has been founder and Vice-Chair of the IEEE CAS Special Interest Group on AgriFood Electronics, and founder and Editor in Chief of the IEEE Transactions on AgriFood Electronics, General Chair of IEEE BioCAS (Biomedical Circuits and Systems) Conference in 2017 in Torino, and founder of IEEE FoodCAS Workshop (Circuits and Systems for the Foodchain). His research is carried out in collaboration with the EPFL Lausanne, Tel Aviv University, MIT and Harvard Medical School (project SISTER: Smart electronic IoT SysTEms for Rehabilitation sciences).