

PhD in Electrical, Electronics and Communications Engineering

Research Title: Electronics and Communications Engineering

Funded by	DET/Ateneo fondi CRT
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Supervisor	Prof. Stefano Grivet-Talocia (stefano.grivet@polito.it) [Coordinator of the PhD Program] The actual tutor will be assigned by the Coordinator after verification of the research interests of the Candidate
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Contact	det.polito.it
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Context of the research activity	<p>The Department of Electronics and Telecommunications (DET) has research interests in all ICT fields, ranging from higher-level systems (telecommunications networks, electronic systems, and equipment) to the circuit and device level. The coexistence of both academic research carried out as part of national and international projects and applied research, often linked to the needs of industry, gives the Department a technological edge.</p> <p>The DET, with the partial support of CRT Foundation, intends to support one PhD candidate for cycle 37, to be recruited in Fall 2021. The specific research topic may be selected by the candidate from the following list, possibly including cross-disciplinary applications.</p> <ul style="list-style-type: none">Analog, Power and Mixed-Signal Circuits and Embedded SystemsAntennas, electromagnetic devices, propagation, and radarsBig Data, Machine Learning, Neural Networks and Data ScienceBiomedical devices and applicationsCommunication and Computer NetworksComputational Electromagnetics (CEM) and EM simulationElectromagnetic Compatibility, Signal and Power IntegrityElectronic devices: modeling and characterizationGeo-positioning, Navigation Systems and Remote sensingMechatronics and robotics
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	<p>Micro and nanotechnologies, devices, systems, and applications Modeling, simulation, and CAD Multimedia Signal Processing Optical and Wireless Digital Transmissions Systems Photonic devices and solar cells Radio frequency and microwave electronics Systems, Automation and Control VLSI theory, design, and applications</p> <p>For more details, see http://dottorato.polito.it/eet/en/research_proposal</p>
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Objectives	<p>The general aim is to develop a better understanding of fundamental processes, theory, applications, technologies in the broad ICT field, with a view to develop innovative solutions for problems that are of interest within the field of electronics and communications engineering, in accordance with the mission of DET. Collaboration with international institutions, both academic and private, is expected. A secondment period of at least three months is also expected.</p> <p>Publications on peer reviewed international journals are foreseeable (and required) outcomes of the research work.</p>
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Skills and competencies for the development of the activity	<p>A solid background in electrical/electronic and communications engineering is required. Specific competencies that will be required for the development of the activity will be discussed with the tutor once the specific research topic is defined. A customized training program will be defined to fill any missing competencies.</p>
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