ELECTRICAL, ELECTRONICS AND COMMUNICATIONS ENGINEERING

PNRR - Charging Station Lab for Electric Vehicles

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] Politecnico di TORINO [P.iva/CF:00518460019]
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Context of the research activity	Progetto finanziato nell'ambito del PNRR - CUP E13B22000020001
Objectives	The research activity is enrolled inside a larger National Research project entitled devoted to the Italian north-western area: NODES "Ecosistemi per l'innovazione" (innovation ecosystems) the whole project involves different actors to cope with innovation in many technical fields. The specific activity is centered in the SPOKE 1- INDUSTRY 4.0 FOR SUSTAINABLE MOBILITY AND AEROSPACE – and cover the sustainable mobility area. The scope of the project, to which the PhD position is dedicated, is the creation of a charging station able to host different kind of experiment in the Electric Vehicle (EV) charging and in the different vehicle to grid (V2G) configuration. The infrastructure will finally represent a testing facility for applications of smart charging and new connectivity solutions and services. The candidate activity is focused on the design and support in the: - development of the hardware and control systems for innovative electric recharging devices - design and development of systems for recharging and control - integration of vehicle to grid solutions: design and development of components and systems for innovative vehicle to grid interconnection solutions Different innovative solution will be possibly integrated in the Charging Station Lab so the candidate should also help in the coordination of the different elements in the design and implementation.
Skills and competencies for the development of	The candidate competences should than cover the area of Electric Engineering with specific focus in the charging areas. Ideal candidate should have good skill in on-board and off-board charging hardware for electrically propelled vehicles, good competence in the electric grid rules and

development of the activity	possibilities related to the EV charging finally good skill on lithium-Ion batteries is surely welcome.