

MECHANICAL ENGINEERING

MUR DM 117/Edison - Robotica di servizio per attività di ispezione in ambito industriale

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] EDISON S.P.A. [P.iva/CF:08263330014] Politecnico di TORINO [P.iva/CF:00518460019]
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Context of the research activity	<p>The research activity will be oriented towards the development of mobile robotic solutions for inspection, maintenance, monitoring in the industrial field. A particular focus will be dedicated to plants for the production and distribution of energy also from renewable sources.</p> <p>The theme is fully consistent with M1C2 of the PNRR - digitization, innovation and competitiveness of the production system.</p> <p>Progetto finanziato nell'ambito del PNRR – DM 117/2023 - CUP E14D23002030004</p>
Objectives	<p>The goal of the project is the development of a mobile robotic platform that can perform inspection, maintenance, monitoring in the industrial environment, thus supporting professionals in carrying out basic operations that do not necessarily require the intervention of qualified personnel. The target is to develop a prototype capable of demonstrating the feasibility and effectiveness of using these technologies. Among the numerous possible scenarios, some particularly relevant features will be identified.</p> <p>A particular focus will be dedicated to plants for the production and distribution of energy also from renewable sources.</p> <p>To perform these operations, the mobile robot will be equipped with sensors for autonomous navigation, with a collaborative articulated manipulator equipped with a vision system and with a set of specific tools and sensors for each application.</p>
Skills and competencies	<p>Design of innovative robotic applications,</p> <ul style="list-style-type: none">- Mechanical design skills. In particular, a marked proneness to strictly defined methodological design processes, made necessary by both the

**for the
development of
the activity**

modularity at the base of the project and the plurality of non-trivial engineering issues involved.

- Electrical and control basic skills
- Experimental abilities.