

ELECTRICAL, ELECTRONICS AND COMMUNICATIONS ENGINEERING

MUR DM 117/Leonardo - High Power A/C Electrification, modeling/experimental correlation

Funded By	LEONARDO S.p.A. (Roma) [P.iva/CF:00881841001] 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	The research activity aims to develop modeling and sizing tools for electrical energy conversion systems dedicated to the electrification of next generation aircraft. Progetto finanziato nell'ambito del PNRR - DM 117/2023 - CUP E14D23002000004
Objectives	The research activities conducted by the PhD student will take place in the context of the development of enabling tools for the electrification process of air transport. In particular the candidate will study advanced methods/technologies for modelling and virtualisation/emulation of electrical energy conversion architectures and systems dedicated to the application in electric or hybrid aircrafts. These tools are dedicated to the design, prototyping and validation phases of on-board electrical equipment and are essential for the development of the digital twin of next generation aeronautical platforms. The research activities of the PhD will be carried out in collaboration with the competent division of Leonardo S.p.A.
Skills and competencies for the development of the activity	The candidate must have an in-depth knowledge of the fundamentals and of the advanced technical solutions of the electromechanical and static conversion of electrical energy. Furthermore, the candidate is required to be motivated/interested in the experimental research and laboratory validation activities.

