

Fondo Sociale Europeo Plus 2021/2027

FSE+

Sportello 2025 P.S. 20/24

Sostegno alla realizzazione di dottorati di ricerca

With Decree No. 9526/GRFVG of February 28, 2025, the Friuli Venezia Giulia Region published the Notice regarding the submission of operations for Specific Program No. 20/24, which aims to support higher education through the realization of PhD programs.

Specific Programme 20/24, through the funding of doctoral scholarships, contributes to the achievement of the objectives of the Sustainable Smart Specialisation Strategy (S4). It supports the development or strengthening of integration with the regional production system and/or research organisations, through coordination and collaboration mechanisms with regional enterprises or research bodies, or by leveraging the potential for technology transfer of processes, products, applications, or, more broadly, research outcomes.

- Sportello 2025
- Ciclo 41
- CUP J93C25000640008
- Progetto 2025/6525/14

Dottorato in **Industrial and Information Engineering**

“Models and Methods for the Study of Zonal DC Medium Voltage Electrical Networks”

The project studies the functional integration of power generation/storage on zonal direct current electrical networks. Such electrical networks are fundamental in the energy transition, where intermittent renewable sources are manageable in the presence of advanced control of electronic converters. The method moves toward advanced solutions, proposes modifications/adaptations, and develops tests in an environment equivalent to the real one. The doctoral student will propose control techniques for the efficient management of sources/storage/loads in a zonal architecture, in order to achieve an optimum of efficiency and dynamic response. Being developed with HIL platforms, the testing will be entirely consistent with testing on the physical system. This approach involves the real-time interaction (Power Hardware In the Loop) of parts of the physical system with the system emulated by electronic platforms. The results will be developed in international conferences and scientific journals of recognized quality.