

## Operations Research Techniques in Electrical Engineering: Bridging Theory and Practice

held by

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Venue:

Biblioteca "Lorenzo Poggi", DESTEC, Polo A

Dates:

- Friday, 20th September 2024, 9 a.m. – 1 p.m.
- Friday, 27th September 2024, 9 a.m. – 1 p.m.

### Abstract

The application of Operations Research (OR) techniques in Electrical Engineering presents a promising avenue for managing complex systems and processes. This course is not intended to be a conventional mathematics or computer science course; rather, it aims to introduce doctoral candidates in engineering to the principles of OR tailored specifically to the challenges of electrical engineering problems. While the course primarily emphasizes applications in electrical engineering, it aims to be beneficial for other fields as well, given the universality of OR methodologies.

The session will cover key OR concepts such as simulation, optimization, and decision-making, contextualized within electrical engineering scenarios. The emphasis will be placed on exploring the main existing approaches to selecting the most appropriate methodology for one's specific case. In addition, the course will address common pitfalls in applying OR techniques in engineering contexts, including the misuse of terminology and inefficient problem-solving approaches. Practical tools and methodologies, including coding and software utilization, will be provided to empower attendees to implement OR solutions effectively in their research and professional endeavors.