# Mario Nervi

Associate professor

✉ mario.nervi@unige.it

📞 +39 010 353 2044

## Education and training

### 1994

**PhD in Power Electrical Engineering**

Formulazione teorica e sviluppo di un programma analisi elettromagnetica tridimensionale per problemi a correnti parassite (Theoretical formulation and development of a 3D electromagnetic eddy-current code)

Università di Genova - Genova - IT

### 1989

**Laurea (V.O.) in Ingegneria Elettrotecnica (M.Sc. in Power Electrical Engineering)**

Sviluppo ed ottimizzazione di un codice ad elementi finiti per l'analisi termomagnetica di bobine toroidali di Tokamak resistivi (Development and optimisation of a Finite Element code for Thermal-Magnetic analysis of Tokamak machines toroidal coils) - 110/110 lode (full marks hon)

Università di Genova - Genova - IT

## Academic experience

### 2004 - ONGOING

**Associate Professor**

Università di Genova - Genova - IT

Teaching Circuit Theory and low frequency Electromagnetic Fields research training higher education

### 1994 - 2003

**Assistant Professor**

Università di Genova - Genova - IT

Teaching low frequency Electromagnetic Fields research training higher education

## Work experience

### 1990

**Auxiliary Agent of the Commission of the European Union in charge of studies A/III/1**

Commission of the European Union Joint Research Centre Ispra Site - Ispra - IT

To study the electromechanical behaviour of components (first wall

components) for the controlled nuclear fusion reactor ITER.

## Language skills

**English**
Proficient

**French**
Independent

**German**
Basic

## Teaching activity

Currenty I hold the courses/modules of:

- Circuit Theory for Power Electrical Engineering;
- Low frequency Electromagnetic Field Theory fo Power Electrical Engineering.

## Postgraduate research and teaching activity

**Supervision of PhD students, residents and post-doctoral fellows**

Over the years I have been several time Supervisor of Ph.D. research, and, in particular:

- Algorithms for the forecast of loads on power networks;
- Compute Aided Design of superconducting magnets;
- Innovative techniques for the computation of the current field distribution in layered grounds.

## Research interests

- Electromagnetic CAD and High Performance Computing;
- Applied Numerical Analysis;
- Finite Element Methods for Electromagnetic Computations;
- Semianalytical Methods for the Computation of stationary Electric and Magnetic Fields;
- Design of Electrical Machines, Resistive and Superconductive Magnets;
- Optimisation Techniques Research & Development;
- Optimisation of  Electromagnetic Devices and Telecommunication Problems;
- Optimisation of Distributed Power Generation Systems (CHP) operations;
- Environmental Electromagnetic Compatibility;
- Analysis and Design of HVDC electrodes;
- Cybersecurity for Electrical Networks.

## Editorial activity

Reviewr of scientific papers to be presented in Symposia / Journals; among them:

- Compumag;
- CEFC;
- COMPEL.

## Other professional activities

Design consulting for several Customers, among which:

- Terna (HVDC ground electrode studies);
- CESI (HVDC ground electrode studies, electromagnetic field simulations);
- ASG Superconductors (design of magnets for medical purposes).