CLAUDIO MOTTA

PERSONAL DATA

Via Don Gennaro, 40
27026 Garlasco (PV), Italia
+39 3287658649
claudio.motta01@universitadipavia.it
Driving licence: A, B

PROFILE

I am an enterprising and curious person with a constant desire of learning and experimenting in technical fields of mechanics, electrotechnics and physics. Good ability to work in team, thanks to boy scouting and volleyball playing experiences.

SKILLS

Languages
Italian: mother tongue level
English (IELTS overall band score): 6
CEFR Level: B2

Computer
Matlab
Simulink
PLECS
Opal-rt Real-Time Simulator
R-T Lab Software
Labview
Autodesk Inventor
Word
Excel

EDUCATION

PhD STUDENT IN ELECTRICAL ENGINEERING • Power Electronics Laboratory, University of Pavia, in Collaboration with ENI SpA • 10/2025 – In Progress
Activity: Design of a SiC MOSFET-based power supply converter and control system for high-current applications, aimed at generating intense magnetic fields for use in nuclear fusion plasma confinement or particle acceleration.

MASTER'S DEGREE in Electrical Engineering – Path: Energetics • University of Pavia • 10/2019 – 09/2024
Master's thesis: "Modeling and Control Design of a Double-Stage AC-DC-DC Converter for Grid-Interfaced Battery Systems"
Final grade: 109/110

BACHELOR'S DEGREE in Industrial Engineering - Path: Mechanics • University of Pavia • 09/2013 – 07/2019
Bachelor's thesis: "Meat Slicer redesign with the aim of increasing the Frame – Blade distance".
Final grade: 95/110

HIGH SCHOOL DIPLOMA • Liceo Scientifico Niccolò Copernico • 09/2008 – 07/2013
Final grade: 83/100

EXPERIENCE

RESEARCHER ON POWER ELECTRONICS • Power Electronics Laboratory, University of Pavia • 01/2025 – In Progress

- ***Activity*** *(in collaboration with* ***NIDEC Conversion SPA*** *company)*: three phase grid connected multilevel STATCOM (made of cascaded H bridges for Supercapacitors storage system integration), for extreme high voltage power systems, computer modeling for real-time simulation and control system's hardware testing.
  Knowledge and skills acquired: grid connected multilevel converters topology and control, real-time modeling and simulation, Opal-rt real-time simulator, R-T Lab software.

- ***Activity*** *(in collaboration with* ***Università di Cagliari****)*: grid Active Filtering, using a Three Phase Inverter, connected to a Triple Active Bridge for energy storage systems integration.
  Knowledge and skills acquired: "Instantaneous Power Theory" for grid active filtering; Three Phase Inverter, Dual and Triple Active Bridges topology, design and control strategies; Matlab and Simulink softwares for electrical simulations; Opal-rt Real-Time simulator for "Hardware in the Loop" and "Power Hardware in the Loop" simulations.

HOBBIES

Volleyball
Archery
Travel
Physics
Music

EMPLOYMENT • Collarini STP SRL • 04/2024 – 10/2024

- ***Activity***: energy audit and efficiency for companies, photovoltaic plants design.
  Knowledge and skills acquired: energy management and efficiency, energy audit draw up, photovoltaic plants topologies; Excel software.

MASTER'S DEGREE THESIS • Power Electronics Laboratory, University of Pavia • 09/2023 – 09/2024

- ***Activity***: average modeling of power converters; design of control system and average simulations of a double stage, single phase, power converter made up by an H Bridge and a Dual Active Bridge.
  Knowledge and skills acquired: "Switched", "State Space Average" and "Generalized Average" mathematical modeling; Dual Active Bridge and H Bridge modeling and control; Matlab and Simulink for implementing numerical simulations; power converters design and controlling techniques.

STAGE • Politecnico di Milano • 03/2019 – 06/2019

- ***Activity***: Computation of mechanical stress and deformation in a slicer's components with Von Mises criterion and Elastic Curve method.

INTERSHIP • Essedue Affettatrici SRL • 09/2018 – 06/2019

Bachelor's thesis carried out at "Essedue Affettatrici SRL" an Italian meat slicers manufacturer.

- ***Activity***: meat slicer redesign with the aim of increasing the frame – blade distance.
  Knowledge and skills acquired: mechanical stress and deformation analysis with Von Mises method, Guest Tresca method, Elastic Curve method; Autodesk Inventor 3D Modeling.

VOLLEYBALL • 2012 – 2024
Volleyball athlete in official teams, C and D series level.

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 GDPR

Date: 10/10/2025