

# GREGORIO CUTULI | CV

- ▶ **Personal Interests:** Working and Research in "Electric Machine Design and Optimization for Sustainability, in E-mobility Applications."
- ▶ **Soft Skills:** Critical thinking in individual research studies; Flexibility and Adaptability as abilities to face changes; Pro- activity in complex problem setting and solving



## Work Experience

02/22 - 10/22 **Silk Sports Car Company, E-Motor Engineer** Reggio Emilia, Italy

- ▶ **Job Description:** Concept and Detailed Design of Electric Motors for e-mobility applications, using specific softwares for Electromagnetic, Thermal, Mechanical, and NVH optimization analysis. Manufacturing aspects for product Prototyping and Industrialization, contacts with external suppliers. System level analysis and integration.
- ▶ **Job Title:** E-motor Engineer, E-axle Team

08/21 - 12/21 **Volvo Cars, Internship/ Master Thesis work** Gothenburg, Sweden

- ▶ **Study Description:** Focus on electromagnetic design/optimization, cooling system design, insulation design, and production aspects of electric machines. Review and investigation on possible replacement materials, including electric, thermal and mechanical properties (i.e. Aluminum windings in hairpin solutions)
- ▶ **Job Title:** Electrical Design Engineer, Electro-Magnetic Design Team

## Education

11/22 - 11/25 **Double PhD, UNIMORE and UoN** Modena, Italy and Nottingham UK

- ▶ **Information and Communication Technologies- ICT**
- ▶ **Topic:** High Reliable and Sustainable Electric Machines for Transportation Electrification

09/19 - 02/22 **Master's Degree, MUNER** Modena, Italy

- ▶ **Advanced Automotive Engineering - Advanced Powertrain**
- ▶ **Thesis:** Aluminum Hairpin Solution for Electrical Machines in E-Mobility Applications
- ▶ **Final grade:** 110/110 Cum Laude

09/16 - 07/19 **Bachelor's Degree, UNIMORE** Modena, Italy

- ▶ **Mechanical Engineering**
- ▶ **Final grade:** 110/110 Cum Laude

09/11 - 07/16 **High School Diploma, Vito Capialdi** Vibo Valentia, Italy

- ▶ **Language High School**
- ▶ **Final grade:** 100/100 Cum Laude

## »»» Digital Skills- Softwares

- » JMAG: Electromagnetic Design of Electric Machines, using Multi-objective genetic algorithm for Optimization process
  
- » COMSOL: Thermal/Cooling System Design and Optimization of Electric Machines
- » Flux: Advanced Electromagnetic Calculation of Electric Machines
- » Motor-CAD: Electromagnetic and Thermal Calculation of Electric Machines
  
- » Star-CCM+: CFD and CHT simulations for Motor Cooling System Design
- » MarcMentat: Mechanical structural simulations
  
- » CATIA, Solidworks: Parametric 3D geometry modeling
  
- » EOMYS- Manatee : e-NVH analysis for Electric Motors. Sound power level graph extrapolation
  
- » MATLAB : Programming, Data Import and Management
  
- » MATLAB Simulink: Model-Based Control implementation for Electric machine control strategies

## »»» Language Skills- Certifications

- » Italian : · Native speaker
  
- » English : · IELTS Academic English Certification - Score 7.5 (2022)  
Speaking: 6.5  
Writing: 6.5  
Listening: 8  
Reading: 8  
  
· FCE - First Certificate in English
  
- » German : · B2 - Goethe-Institut
  
- » French : · B2 - DELF

## »»» Publications

- » G. Cutuli, D. Barater, S. Nategh, and B. Raghuraman "Aluminum Hairpin Solution for Electrical Machines in E-Mobility Applications Part I: Electromagnetic Aspects " 2022 International Conference on Electrical Machines (ICEM), 2022
- » G. Cutuli, D. Barater, S. Nategh, D. Ericsson, and M. Törmänen "Aluminum Hairpin Solution for Electrical Machines in E-Mobility Applications Part II:Thermal and Cooling Aspects" 2022 International Conference on Electrical Machines (ICEM), 2022
- » G. Cutuli, S. Nategh, D. Barater, E. Koutrouli "Aluminum Hairpin Solution for Electrical Machines in E-Mobility Applications" in IEEE Transactions on Transportation Electrification, 2022, Submitted