

Luca Cibrario

E-mail: luca.cibrario@yahoo.it
Address: Via Vigna 29, 10073 Ciriè, Italy
Phone Number: +39 3427440029

EDUCATION

Polytechnic University of Turin, Italy – PhD in Mechanical Engineering *November 2022-Present*
PhD topic: “Multidisciplinary Optimization and Design for Additive Manufacturing of Advanced Heat Exchangers”

Brief description: Development of an automated framework entirely established on open-source software for the design of high-performance metamaterials-based heat exchangers. Employment of Finite Element Analysis (FEA) and Computational Fluid Dynamics (CFD) tools to optimize structural and thermal performance through a multi-scale homogenization approach, while ensuring printability and manufacturability through Additive Manufacturing (AM) techniques.

Polytechnic University of Turin, Italy – MSc in Mechatronic Engineering *October 2020-October 2022*
Graduation grade: 110/110 with Laude

Final paper: “Application of AI algorithms for the classification of the health status of rotating systems”

Polytechnic University of Turin, Italy – BSc in Mechanical Engineering *October 2017-July 2020*
Graduation grade: 107/110

Final paper: “Impact resistant composite materials”

Liceo Scientifico Galileo Galilei – High School *September 2012-July 2017*
High School Diploma in Scientific Studies
Final grade: 100/100 with Laude

WORK EXPERIENCE

Punch Torino SpA (industrial partner of PhD course) *November 2022-Present*
Currently working on implicit/CAD modeling and static/dynamic structural analysis of lattice structures

LANGUAGE & IT SKILLS

Italian Native speaker
English Fluent, IELTS Certificate grade: 8

IT
Programming languages: Python, C, Arduino
Numeric Computing: Matlab, Simulink
FEA: CalculiX, Abaqus
CAD: Solidworks, nTopology, FreeCAD, Salome, Gmsh
General purpose: Word, Excel, PowerPoint, LaTeX

PUBLICATIONS

Brusa, E.; Cibrario, L.; Delprete, C.; Di Maggio, L.G. **Explainable AI for Machine Fault Diagnosis: Understanding Features’ Contribution in Machine Learning Models for Industrial Condition Monitoring**. Appl. Sci. 2023, 13, 2038. <https://doi.org/10.3390/app13042038>

ACTIVITIES & INTERESTS

Cycling (semi-professional level) *From 2010*
Achieved many national successes in road cycling, gravel and cyclocross. Former rider of a UCI Continental Team and member of the national team at the Gravel World and European Championships 2023.