Vincenzo Calvaresi BS.c.

Curriculum vitae – March 2023

Ancona
Italy
+39 3276847524
vincenzo.calvaresi@gmail.com

In short

I am passionate about renewable energy and firmly believe in their importance for the future of our planet. I have acquired specific skills through studies and personal research, and I am always seeking opportunities to deepen my knowledge in the field.

Education

Since 2021 **M.Sc.**, *in Mechanical Engineering - Mechanical Design, (current avg. mark 29/30)*,
Università Politecnica delle Marche (UNIVPM), Ancona, Italy., (Expected graduation (late 2023).

2013 - '21 **B.Sc.**, *in Mechanical Engineering*,
Università Politecnica delle Marche (UNIVPM), Ancona, Italy.,
Thesis: Design of the pretension support modification for dynamic material testing. Supervisor: Prof. Marco Rossi.
Description: This thesis concerns the Hopkinson bar, in particular, the aim of this study was the design of a modification of the pre-tensioning system for the assembly of large springs. This has been achieved through 2 main steps:
(i) Design of the component in CATIA V5®; (ii) Structural verification in ANSYS®.

Practical Projects

Fall 2022 **CFD study of a flux around a Formula 1 tire in contact with the floor**, *Role: designer*, UNIVPM, Italy,
Focus: Comparison of the aerodynamic parameters through 2D tyre modeling in Ansys fluent .

Fall 2022 **Design of a sustainable wind turbine blade's pitch system**, *Role: designer*, UNIVPM, Italy,
Detailed achievements: Design of a sustainable wind turbine blade and its pitch system using FEM analysis .

Spring 2022 **Structural analysis of a composite wind turbine blade**, *Role: designer*, UNIVPM, Italy,
Focus: CFD and ACP PrePost analisys for failure in composite layers of a wind turbine .

Spring 2022 **Design of a robotic smart assistant**, *Role: lead engineer*, UNIVPM, Italy,
Detailed achievements: Virtual prototyping of a smart assistant through market analysis, reverse engineering, CAD design, ergonomic and FEM analysis.

Spring 2022 **Falcon wing door kinematics analysis**, *Role: lead engineer*, UNIVPM, Italy,
Detailed achievements: falcon wing sizing of engines and bearings.

Fall 2020 **Design of the pretension support modification for dynamic material testing**, *Role: designer*, UNIVPM, Italy,
Detailed achievements: 3D CAD design with CATIA V5 software; Structural analysis using ANSYS software.

Knowledge areas

• Continuum mechanic • Materials mechanics and mechanical metallurgy • Fluid dynamics • Functional design's components and mechanical systems • Hydraulic and pneumatic systems • Aerodynamics

Computer skills

CAD 2D/3D	Solid Edge, Rhinoceros, CATIA V5, Siemens NX	Intermidiate
Simulation	MSC Adams, Tecnomatix, Simulink, XFOIL	Beginner
CAE	ANSYS	Intermediate
DIC	MatchID	Intermediate
Prog. Lang.	Python - Matlab	Intermidiate
Op. Systems	Windows (XP, 7, 8, 10, 11) - Linux - MAC OS	Intermidiate
Office Suite	Word, Powerpoint, Excel, Teams	Intermediate

Soft Skills

• Team-player • Confidence • Cooperation • Curiosity • Decision Making • Observation • Discipline

Languages

Italian: - Native, **English:** - C1

Additional training

2023 • Machine learning • Introduction to solar cells • Wind energy (Coursera + certificate)

Extra

○ Open to relocate upon request