

# Gian Maria Santi, PhD

## Mechanical Engineering

✉ [gianmaria.santi2@gmail.com](mailto:gianmaria.santi2@gmail.com) · 📞 +39 340 9491137  
📍 Bologna, Italy · 🌐 [Git-projects](#) · [Gian Maria Santi - Website](#)

## Skills

### Programming Languages

Proficient in **Python**, **Matlab** and **Wolfram Mathematica**.

### CAD/CAM

Experienced in **PTC Creo**, **Solidworks** and **SprutCAM X** for detailed mechanical design.

### Simulation

Experienced in using **ANSYS**, **Abaqus**, and **OpenFoam** for engineering simulations.

### Other

Experienced in **3D printing** and **AR/VR**.

### AI

Familiar with AI applications, including practical usage of **ChatGPT**.

### Languages

**Native Italian** speaker with proficient command of **English**.

### Publications

Several international publications in scientific journals and conferences.  
**Scopus**: 47 publications  
**H-Index**: 11.

## Profile

I am a PhD in Mechanical Engineering with extensive experience in **Mechanical Design**, **Structural Analysis**, and **Programming**.

My background includes applying **Finite Element Methods** (FEM), **CAD** techniques, and **Software Development** on both Windows and Linux platforms for engineering applications.

My passion for chess has honed my ability to solve complex problems and investigate strategic situations.

## Work Experience

### Researcher

Jan 2020 – Ongoing

*Alma Mater Studiorum - University of Bologna*

Develop **FEM solutions** using cutting-edge programming languages applied to complex problems.

### Mechanical Designer

May 2023 – Mar 2024

*SMARTENGINEERING*

Design automatic machines and gained practical experience with **OpenFoam** for industrial applications.

### Software Engineer/Developer

Oct 2019 – May 2020

*Oxford University*

Develop innovative FEM software (four-node square NEFEM element) at Begbroke Science Park, University of Oxford.

## Education

### PhD in Mechanics and Advanced Engineering Science (DIMSAI)

Nov 2017 – Nov 2020

*Alma Mater Studiorum - University of Bologna*

Thesis Title: Mesh Morphing Methods for Virtual Prototyping and Mechanical Component Optimization

### MSc in Mechanical Engineering

Sep 2013 – Oct 2016

*Alma Mater Studiorum - University of Bologna*

### BSc in Mechanical Engineering

Sep 2010 – Dec 2013

*Alma Mater Studiorum - University of Bologna*