

# Luigi Casagrande

Materials and Nanotechnology Engineer

[Italian](#) [✉ luigi.casagrande@outlook.it](mailto:luigi.casagrande@outlook.it) [in luigi-casagrande](https://www.linkedin.com/in/luigi-casagrande/)

## Education

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<b>MS</b>	POLITECNICO DI MILANO, <b>Materials Engineering and Nanotechnology</b> ( <i>english</i> )	Sep 2023 - Mar 2026 Milano, Italy 
	<ul style="list-style-type: none"> <li>Master's <b>Thesis</b> in <i>Solid-State Aluminium Recycling</i></li> <li>Relevant coursework: "Metallic Materials and Product Innovation", "Composite Materials", "Life Cycle Assessment", "Materials for Energy"</li> </ul>	
<b>EX</b>	SHANGHAI JIAO TONG UNIVERSITY, <b>Materials Engineering</b>	Sep 2024 - Feb 2025 Shanghai, China 
	<ul style="list-style-type: none"> <li><i>World Wide Exchange Program</i> offered by Politecnico di Milano</li> <li>Projects: "Physical aging in glassy polymers: stress relaxation and creep compliance analysis", "Molecular dynamics modeling of melting behavior in pure Ni, Zr, and Ni-Zr alloys"</li> </ul>	
<b>BS</b>	POLITECNICO DI MILANO, <b>Materials Engineering and Nanotechnology</b> ( <i>italian</i> )	Sep 2020 - Jul 2023 Milano, Italy 
	<ul style="list-style-type: none"> <li>Bachelor's <b>Thesis</b> in <i>Printed Devices for Energy Storage</i></li> <li>Relevant coursework: "Steelmaking", "CAD Modelling", "Data Analysis and Experimental Methods", "Structural Mechanics"</li> </ul>	
<b>EX</b>	KAWANA WATERS HIGH SCHOOL, <b>STEM subjects</b>	Jul 2016 - Sep 2016 Queensland, Australia 
	<ul style="list-style-type: none"> <li>Independent study term abroad during High School</li> </ul>	

## Skills

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**Languages:** • Italian (*native*) • English (*fluent*) • Chinese (*elementary*) • French (*elementary*)

**Programming & Scripting:** Python ·  $\text{\LaTeX}$  · JavaScript · C++ · HTML/CSS

**Data Analysis & Productivity Tools:** Microsoft Office (Word, Excel, PowerPoint, Access) · Power BI · JMP Pro

**Engineering Design & Simulation Software:** Autodesk Inventor · SolidWorks · Abaqus FEA · COMSOL Multiphysics

**Technical & Scientific Computing Environments:** Linux (Debian) · openLCA · LAMMPS · MATLAB

## Certificates

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➤ <b>IELTS Academic</b> ◀	issued by: <i>British Council</i> English language certification, C1 Level (7.5)	2023
➤ <b>International Pool Lifeguard Certification</b> ◀	issued by: <i>Federazione Italiana Nuoto</i>	2017
➤ <b>Pre-Academic Piano Certificates</b> ◀	issued by: <i>Conservatori di Musica italiani</i>	2013 & 2016
➤ <b>Marine Military Sailing Course</b> ◀	issued by: <i>Federazione Italiana Vela</i>	2015

## About Me

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- Since childhood, I have pursued **competitive swimming** at a national level, alongside an active engagement in **music** through solo and ensemble performances. These sustained disciplines have shaped a highly determined, resilient, and **results-driven approach**.
- I have always **challenged myself** by participating in mathematics, computer science, and chemistry competitions, and was awarded the 'Aurea' Cup in the high school team championship. These experiences enhanced my **teamwork abilities**, **critical thinking**, and **problem-solving** skills.
- Travelling and engaging with different cultures have enhanced my **adaptability** and **open-minded approach** to diverse environments, contributing to my full proficiency in **English** and my ongoing study of the **Chinese** language.