

# Giulio Barletta

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## EDUCATION

<b>Politecnico di Torino</b>	In Progress	<b>Ph.D.</b> , Energetics
<b>University of Illinois Chicago</b>	2023	<b>M.S.</b> , Mechanical Engineering, GPA 4.0
<b>Politecnico di Torino</b>	2023	<b>M.S.</b> , Energy and Nuclear Engineering, 110 cum laude
	2021	<b>B.S.</b> , Energy Engineering, 110 cum laude

## RESEARCH EXPERIENCE

My current research area is Artificial Intelligence applied to the discovery and optimization of materials for energy, with a focus on perovskite-based solar cells.

<b>Politecnico di Torino</b> SMaLL, Energy Dept. (Turin, Italy)	11/2023 – Ongoing	<b>Ph.D. Student</b> Supervisor: Prof. E. Chiavazzo
<b>University of Illinois Chicago</b> MNFTL, Mechanical and Industrial Engineering Dept. (Chicago, IL, USA)	10/2022 – 5/2023	<b>Graduate Research Assistant</b> Supervisor: Prof. C.M. Megaridis
<b>Politecnico di Torino</b> Energy Center Lab (Turin, Italy)	3/2021 – 6/2021	<b>Undergraduate Research Assistant</b> Supervisor: Prof. D. Papurello

## TEACHING EXPERIENCE

<b>Politecnico di Torino</b> Energy Department (Turin, Italy)	03/2025 – Ongoing	<b>Teaching Assistant</b> Energy Storage Supervisor: Prof. E. Chiavazzo
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## PUBLICATIONS AND PAPERS

- Leveraging quantum computing for heat conduction analysis: A case study in thermal engineering. Pietro Asinari, Matteo Maria Piredda, Giulio Barletta, Paolo De Angelis, Nada

Alghamdi, Giovanni Trezza, Marina Provenzano, Matteo Fasano, and Eliodoro Chiavazzo. *Case Studies in Thermal Engineering*, 2026.

- Energy-GNoME: A Living Database of Selected Materials for Energy Applications. Paolo De Angelis, Giulio Barletta, Giovanni Trezza, Pietro Asinari, and Eliodoro Chiavazzo. *Energy and AI*, 2025.
- Exploring machine learning models to predict atmospheric water harvesting with an ion deposition membrane. Giulio Barletta, Shashwata Moitra, Sybil Derrible, Alex Mathew, Anoop Muraleedharan Nair, and Constantine M. Megaridis. *Journal of Water Process Engineering*, 2025.
- Learning *Effective Good* Variables from Physical Data. Giulio Barletta, Giovanni Trezza, and Eliodoro Chiavazzo. *Machine Learning and Knowledge Extraction*, 2024.
- Thévenin’s Battery Model Parameter Estimation Based on Simulink. Giulio Barletta, Piera DiPrima, and Davide Papurello. *Energies*, 2022.

## AWARDS

- Politecnico di Torino – University of Illinois Chicago joint *TOP-UIC* scholarship, 2022-2023.
- *Giovani Talenti* Scholarship Program, Politecnico di Torino, 2018-2021.

## MISCELLANY

- Volunteer for collection of food donations with Caritas Italiana.