

Giulio Barletta

giulio.barletta@polito.it — <https://giulio-barl.github.io/>

EDUCATION

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

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

TEACHING EXPERIENCE

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

- 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.

- Notes on Quantum Computing for Thermal Science. Pietro Asinari, Nada Alghamdi, Paolo De Angelis, Giulio Barletta, Giovanni Trezza, Marina Provenzano, Matteo Maria Piredda, Matteo Fasano, and Eliodoro Chiavazzo. *arXiv*, 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.