

Giulio Barletta

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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

- 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.