

Paolo De Angelis is a Postdoctoral Researcher at the Energy Department of the Politecnico di Torino. He completed his BSc in Mechanical Engineering at the Politecnico di Torino in 2015, with a thesis on applying quaternions to solve Gimbal lock problems in lumped parameter codes. In 2017, he earned his MSc in Mechanical Engineering, focusing on testing and evaluating adaptive mesh algorithms for turbulence and developing flame propagation models in internal combustion engine chambers. Paolo received his PhD in Energetic Engineering in 2022, with a thesis centered on atomistic modeling of reactive and non-reactive interfaces for energy materials.

His current research focuses on atomistic and multiscale modeling of energy materials, particularly Li-ion and post-Li-ion batteries, nanocomposites, and nanofluids. Paolo uses advanced machine learning tools and force fields to model reactive environments and conduct high-throughput material screening. He leverages his expertise in Molecular Dynamics (MD), Monte Carlo (MC), and Density Functional Theory (DFT) for this research.

He is co-affiliated with the Istituto Italiano di Tecnologia (IIT), working with the Michele Parrinello group, and spent six months conducting research at the University of Illinois Chicago (UIC). Paolo has published eight papers, one of which was featured on the cover of a scientific journal.