NICCOLÒ DI EUGENIO

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SUMMARY

Graduated in Physics at the University of Milano-Bicocca, I am now a PhD student at the Politecnico di Torino, where my research deals with Machine Learning Potentials and DFT Methods to improve Molecular Dynamics simulations of collision cascades in complex superconducting materials. I am also implementing Time-Dependent Ginzburg-Landau simulations of vortex lattice phase transitions. My research interest include the study of Machine Learning and methods, statistical mechanics and numerical modeling.

EDUCATION

PhD - Physics   November 2023 - Present
Politecnico di Torino, DISAT Department, Turin, Italy
Supervisors: Prof. Francesco Laviano, Dott. Daniele Torsello
Description: Application of Machine Learning Potentials and Density Functional Theory to improve Molecular Dynamics simulations of collision cascades in superconductors. Time-Dependent Ginzburg-Landau simulations of vortex lattice phase transitions.

Master's Degree - Solid State Physics   October 2020 - March 2023
University of Milano-Bicocca, Milan, Italy - **110/110 cum laude**
Dissertation Title: **Machine Learning Methods for Approximating the Microstructural Evolution in Two-Phase Systems**
Supervisors: Prof. Francesco Montalenti, Dott. Roberto Bergamaschini
Description: Use of a Convolutional Recurrent Neural Network approach to predict the microstructural evolution of two-phase systems described by a Phase Field model.

Exchange PEI - PEI - Ingénieur - Physics   January 2022 - June 2022
École Polytechnique, Palaiseau, France
Description: Attended classes in both Cycle Ingnieur and Master of Science.

Bachelor's Degree - Physics   October 2016 - September 2020
University of Milano-Bicocca, Milan, Italy
Dissertation Title: **Atomic Force Microscopy Characterization of Epitaxial Nanostructures**
Supervisors: Prof. Stefano Sanguinetti, Prof. Marco Bernasconi
Description: Experimental and computational analysis of SiGe samples. Statistical analysis of the Hopkins-Skellam index regarding the cluster tendency of the data set.

Diploma di Liceo Classico Europeo   September 2011 - July 2016
Baccalauréat Général Littéraire (EsaBac)
Liceo Classico Europeo Melchiorre Delfico, Teramo, Italy

Ontario Secondary School Diploma   September 2014 - June 2015
Nepean High School, Ottawa, Canada

WORKSHOPS/SUMMER SCHOOLS

IREF - Irradiation Effects on HTS for Fusion   November 12 - November 16 2023
Arona, Italy

Summer School: "Bridging Time and Length Scales in Molecular and Materials Modelling"   September 2 - September 6 2024
Lennard-Jones Centre, University of Cambridge (UK)

IV. AWARDS, SCHOLARSHIPS, FELLOWSHIPS AND GRANTS

Ontario Scholar June 2015

Ontario Scholars are high school graduates in the Canadian province of Ontario who attain an average of 80% or greater in their six best Grade 12 courses.

LANGUAGES

Italian	Mother Tongue
English	C2 (Ontario Diploma)
French	B2 (Diplôme du Baccalauréat Général avec la mention bien)

TECHNICAL SKILLS

Programming Languages	Python, Bash, MATLAB, C++, C, FORTRAN
Operating Systems	Linux, Windows
Editors	LaTeX, Microsoft Office
Illustrators	InkScape, GIMP