Dario Coscia

Nationality: Italian
Place and date of birth: Rome, 02 September 1999
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Work Experience

2022 – 2023 **Machine learning researcher**
Research fellow at SISSA *mathLab* group in the field of Deep Learning.

- Working on deep generative modelling for differential equation learning.
- Developing Physics Informed Neural Networks and Neural Operator learning for dynamical system modelling, contributing to PyTorch software PINA.
- Exploring Neural Network learning for unstructured data.

2020 – 2021 **CNR-IOM**
Internship at CNR-IOM Trieste in the field of computational solid-state physics. Building statistical and energetical models, and developing software for testing.

Education

2023 – · · · · **PhD Student**
SISSA, Trieste Italy - UvA, Amsterdam - The Netherlands
Generative Modelling for uncertainty quantification
Neural Operator and Physics Informed learning for solving differential equations

2021 – 2023 **Master's degree Data Science and Scientific Computing**
University of Trieste, Trieste Italy
Artificial Intelligence and Machine learning path
Thesis title: *A generative adversarial method for reduced order modelling*

2018 – 2021 **Bachelor's degree Physics**
University of Trieste, Trieste Italy
Grade: 110/110 "cum laude" (graduated with distinction)
Thesis title: *Modelling the energetics of graphene on a Nickel surface*

2016 – 2018 **United World College of South East Asia**
Singapore, High School
International Baccalaureate (English language)
Grade: 40/45 and bilingual diploma

Research Publications

1 Coscia, D., Demo, N., & Rozza, G. (2023). Generative adversarial reduced order modelling. *arXiv preprint arXiv:2305.15881*.

2 Coscia, D., Ivagnes, A., Demo, N., & Rozza, G. (2023). Physics-informed neural networks for advanced modeling. *Journal of Open Source Software*, *8*(87), 5352. doi:10.21105/joss.05352

3 Coscia, D., Meneghetti, L., Demo, N., Stabile, G., & Rozza, G. (2023). A continuous convolutional trainable filter for modelling unstructured data. *Computational Mechanics*, 1–13. doi:10.1007/s00466-023-02291-1

Awards and Achievements

2021 **SISSA merit scholarship**, the MSc in Data Science and Scientific Computing at University of Trieste SISSA ICTP and University of Udine

Collegio Universitario Luciano Fonda Scholarship, for outstanding students studying at the University of Trieste

2019 **Lucia Malagnini Physics Scholarship**, for the best student in the Physics department at the University of Trieste

2016 **United World College Scholarship**, for outstanding students studying in Italy to attend the prestigious UWC college.

Additional information

Languages **Italian**: native speaker
English: full professional
Spanish: professional working

Computer skills High experience in Python programming language

- High experience in PyTorch framework for Deep Learning
- Experience in ML software: Scikit-learn, Pyro and JAX

Experience in C++ and Fortran 90 programming languages

Reference Available Upon Request

Curriculum Vitae last update: November 26, 2023