

# RICCARDO VALPERGA

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## EDUCATION

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### University of Amsterdam

*Ph.D. Student at the Informatics Institute*

Amsterdam, The Netherlands

Sep 2021 – Sep 2025

- **PhD project: Physics-informed deep learning. Learning dynamics from observations and dynamical systems forecasting.**

### Imperial College London

*M.Sc. in Physics (Extended Research Programme)*

London, UK

Sep 2019 – Sep 2021

Final GPA: 83%

- Final Grade: First Class Honours (88/100).
- **Thesis: Learning Reversible Dynamics. (Published at L4DC 2022).**

### Università Degli Studi Di Torino

*Bachelor in Physics*

Turin, Italy

Sep 2016 – Jul 2019

Final GPA: 29.4/30

- Final Grade: 110/110 Cum Laude
- **Thesis: Simulating compression algorithms for the electromagnetic calorimeter (ECAL) in anticipation of the High-Luminosity upgrade of the LHC at CERN.**

## EXPERIENCE

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### Research Intern

*ServiceNow (Element AI)*

Montreal, Canada

Aug 2024 – present

- Time-series forecasting and causal discovery: change-point detection.

### Research Intern

*INFN*

Turin, Italy

May 2019 – Jul 2019

- Simulation of the lossless compression algorithms for the readout of the electromagnetic calorimeter (ECAL) at the CMS experiment in anticipation of the High-Luminosity upgrade of the LHC.

## SKILLS

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**DL Frameworks:** PyTorch (2019-present), JAX/Flax (2021-present), Tensorflow (2019-2021), Proficient with SLURM scheduler clusters.

**Programming languages:** Python (2016-present), Julia (2019-2021)

**Languages:** Italian (Native); English (C1); French (Beginner).

## SELECTED PUBLICATIONS

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- **Learning reversible symplectic dynamics**  
R Valperga, K Webster, D Turaev, V Klein, J Lamb  
L4DC, 2022 [Oral]
- **Ai-sampler: Adversarial learning of Markov kernels with involutive maps**  
E Egorov\*, R Valperga\*, E Gavves  
ICML, 2024
- **How to train Neural representations: a comprehensive study and benchmark**  
S Papa, R Valperga, D Knigge, M Kofinas, P Lippe, JJ Sonke, E Gavves  
CVPR, 2024
- **Space-Time Continuous PDE Forecasting using Equivariant Neural Fields**  
D M Knigge\*, D R Wessels\*, R Valperga, Samuele Papa, J Sonke, E Gavves, E J Bekkers  
NeurIPS, 2024
- [Complete list of publications](#)

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