FRANCESCO MORRI

fmorri@ipht.fr | Rimini, Italy
francescomorri | francescomorri.github.io

CODING SKILLS

C++ | ROOT | MPI | Python | Numpy | PyTorch | JavaScript | p5.js

LANGUAGES

Italian: Native
English: Fluent
French: Intermediate

ABOUT ME

I am interested in Machine Learning, AI and complex systems behaviour. More in general, I like to model and predict the outcome of real world, complex problems involving multiple agents using intelligent and explainable algorithms. I learned many analytical and numerical techniques during my Bachelor and Master, and in the future I would like to apply them to the implementation of new algorithms.

EDUCATION

BSc | Universtà di Bologna

Oct 2017 – Sep 2020 | Bologna, Italy

- Supervisor: Prof. Rita Fioresi
- Thesis: A thermodynamic approach to deep learning

Visiting Student | SISSA & ICTP

Sep 2020 – Jan 2021 | Trieste, Italy

- Advanced Numerical Methods, Probability and Information Theory, Neuroscience

Erasmus | Sorbonne Université

Sep 2021 – Jan 2022 | Paris, France

- Computational Science, Numerical Simulations, Stochastic Processes

Spring College in Complex Systems | ICTP

Feb 2022 – Mar 2022 | Trieste, Italy

- Stochastic Thermodynamics, Quantitative Viral Dynamics, Information Maximization in Neural Circuits

MSc | Politecnico di Torino

Sep 2020 – Ongoing | Turin, Italy

- Algorithms and Continuous, Stochastic Optimization, Statistical Physics

EXPERIENCE

Research Internship | IPhT (CEA Saclay)

Mar 2022 – Jul 2022 | Paris, France

- Supervisor: Pierfrancesco Urbani
- The project concerns the study of simple algorithms to solve continuous constraint satisfaction problems close to their satisfiability transition. It will consist in a numerical part with simulations and, time permitting, an analytical part.

PUBLICATIONS

On the Thermodynamic Interpretation of Deep Learning System |

2021

- Nielsen, F., Barbaresco, F. (eds) Geometric Science of Information. GSI 2021. Lecture Notes in Computer Science(), vol 12829. Springer
- Authors: Rita Fioresi, Francesco Faglioni, Francesco Morri, Lorenzo Squadrani