



# Computing@PoliTO Workshop

HPC/Big Data/Cloud Computing facilities for research



Need to run thousands of simulations? Interested in data science solutions? Looking for a virtual machine to deploy new applications? Or GPU power for neural network training?

Politecnico has invested in the creation of a modern computing cluster to offer HPC, Big Data and Cloud solutions for research. In this workshop, we will present opportunities offered by the Computing@PoliTO infrastructures, showing their hardware and software characteristics, along with some use cases, research directions, and a general discussion on future steps - based also on the audience demand.

## PROGRAM

**9.45** Welcome and registration - **Paolo Montuschi**

**10.00** **Opening and technology fundamentals**

· HPC&MPI, Cloud&Virtualization: Understanding computing technology for research

**Guido Marchetto**

· Data science and machine learning, the solution to your problems - **Marco Mellia**

**10.20** **Introduction to Polito's Computing Infrastructure**

· HPC@Polito - **Paolo Margara**

· Big Data@Polito - **Idilio Drago**

· Cloud@Polito - **Enrico Venuto**

**10.45** **How Polito's computing infrastructure can support your research**

· High performance computing toward new types of bioinspired dynamic materials - **Giovanni Pavan**

· Large scale parallel simulations in complex geometries - **Stefano Berrone**

· The Big Web - Collecting, storing, processing millions of web pages in minutes - **Martino Trevisan**

· Health and GPUs - accelerating deep learning - **Francesco Ponzio e Marta Lovino**

**12.15**

**Opportunities for collaborations and industrial projects - Marco Mellia**

· The Infra-P Voucher instrument

· Co-location in Polito data-centres - Supporting the infrastructure expansion

· Future steps and demands from the research community

**12.30**

Social Lunch

There will be a final exam (online test) about the topics and technologies presented at the event that will allow PhD students to obtain official credits (ore formazione hard) for their PhD career.

**Registrazione obbligatoria:**

<https://www.eventbrite.it/e/biglietti-computingpolito-workshop-85981780821>



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