
EUROPEAN DOUBLE DEGREE

EUMaster4HPC

The first pan-European Master Programme
for High Performance Computing

BUILDING THE FUTURE

EUMaster4HPC is an HPC European consortium leading a double-degree programme funded by the EuroHPC JU

Leading the way in European Supercomputing

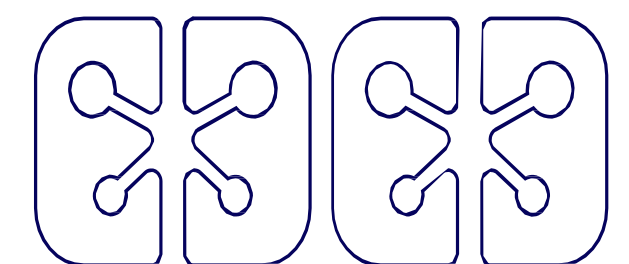
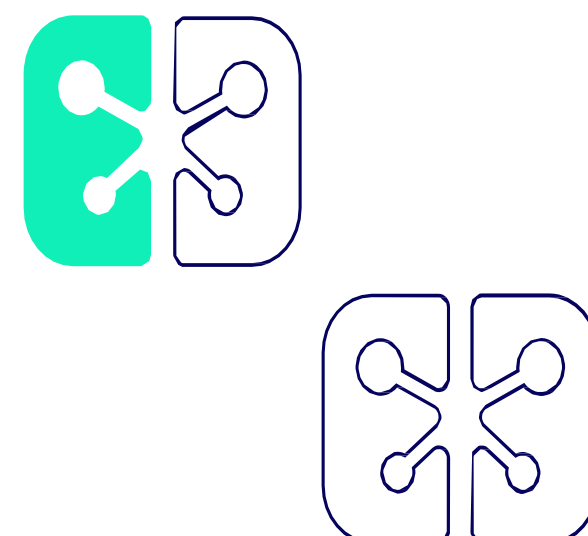
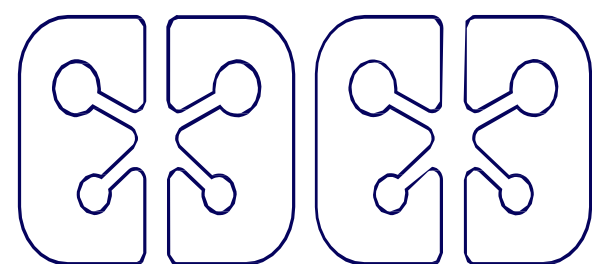


EuroHPC JU is a joint initiative between the EU, European countries and private partners to develop a World Class Supercomputing Ecosystem in Europe

EUROPEAN HPC ECOSYSTEM

EUMaster4HPC is composed of European universities, research/supercomputing centres and industrial partners with the mission of defining a joint curriculum in HPC across Europe and creating a collaborative network leveraging and strengthening the European ecosystem in HPC.

EUMaster4HPC brings together the major players in HPC education in Europe to train **the next generation of highly skilled and talented HPC experts** to drive the European digital transformation.



HOW WE USE HPC IN DIFFERENT INDUSTRIES

1 Manufacturing

Running simulations, such as for autonomous driving, to support the design, production and testing of new products. This enables safer cars, lighter parts, more efficient processes and innovation.

2 Genomics

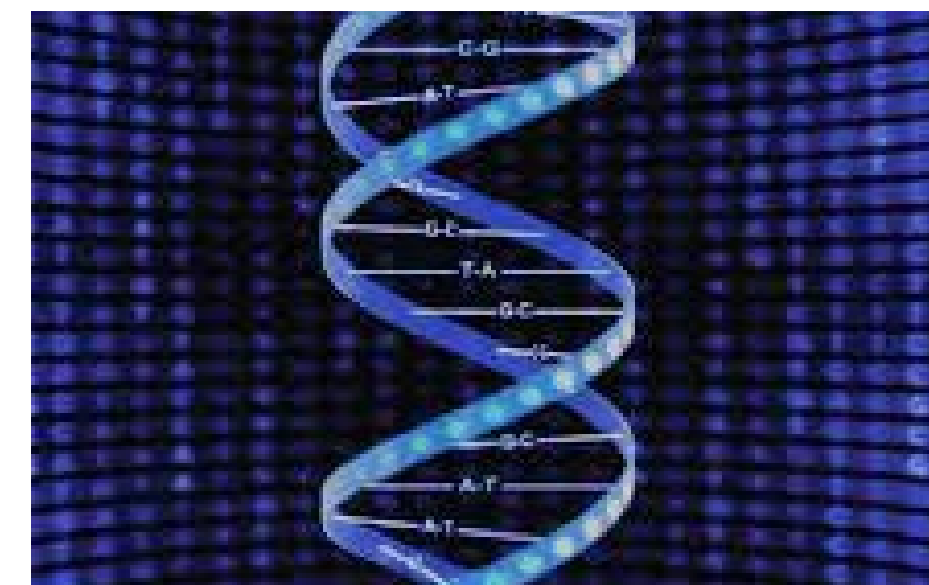
DNA sequencing, drug interaction analysis and performing protein assays to support provenance studies.

3 Healthcare

Drug research, vaccine creation and development of innovative treatments for rare and common diseases.

4 Technology for finance

Performing complex risk analysis, high-frequency trading, financial modelling and fraud detection.



HOW WE USE HPC IN DIFFERENT INDUSTRIES

5 Media and entertainment industry

Animation creation, rendering special effects for films, transcoding huge media files and creating immersive entertainment shows.

6 Aerospace industry

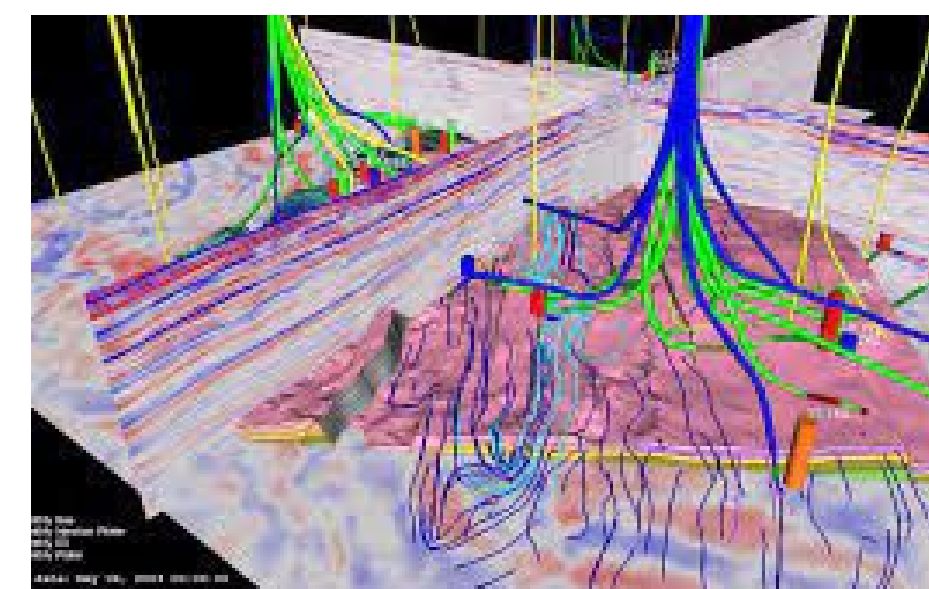
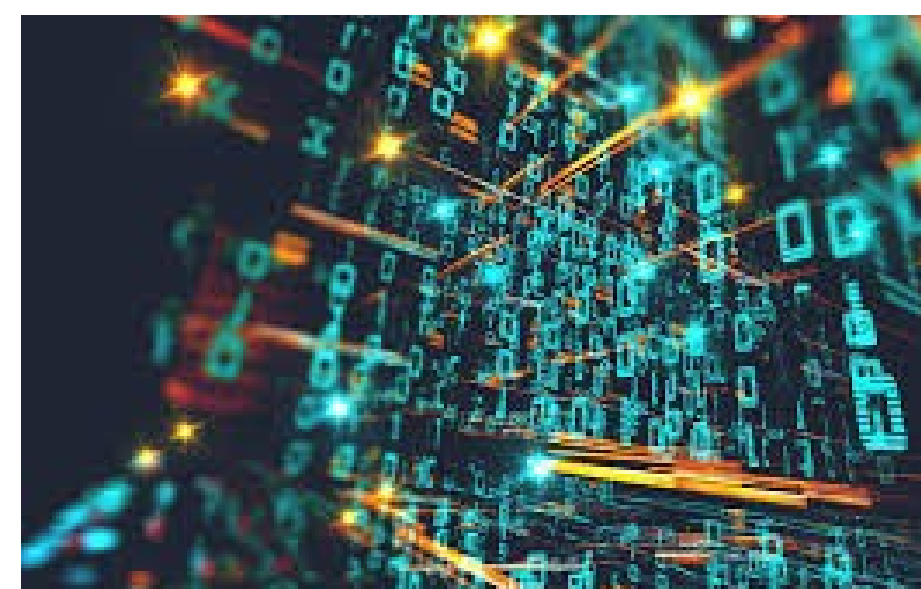
Creation of complex simulations, such as airflow over aircraft wings.

7 Healthcare

Analyse vast amounts of customer data to provide targeted product recommendations and improve the customer experience.

8 Oil and gas industry

Performing spatial analysis and reservoir model testing to predict oil and gas locations, and performing simulations such as fluid flow and seismic processing.



8 AWARDING UNIVERSITIES

Politecnico di Milano, Italy

Università della Svizzera Italiana, Switzerland

Université de Luxembourg, Luxembourg

Sorbonne Université, France

Other partner universities:

Universitat Politècnica de Catalunya, Spain

KTH Royal Institute of Technology, Sweden

Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Sofia University St Kliment Ohridski, Bulgaria

21 PARTICIPATING COUNTRIES



29 NON-AWARDING UNIVERSITIES | 16 CONTRIBUTING PARTIES (INDUSTRY AND RESEARCH) | 36 ADDITIONAL SUPPORTING PARTNERS

DOUBLE DEGREE AGREEMENTS

1ST YEAR

Fundamentals

 **POLITECNICO DI MILANO**
Milano, Italy



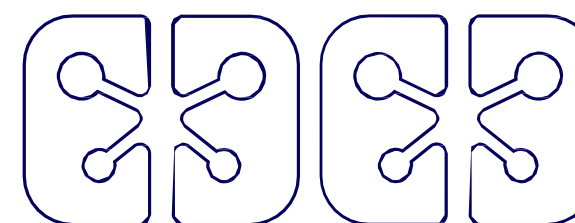
2ND YEAR

Specializations

 **UNIVERSITÀ DELLA SVIZZERA ITALIANA**
Lugano, Switzerland

 **UNIVERSITÉ DU LUXEMBOURG**
Luxembourg, Luxembourg

 **SORBONNE UNIVERSITÉ**
Paris, France



WHAT'S IN FOR THE STUDENTS

2 European diplomas

Mobility

Internship

HPC networking and strong
link with the Industry

**FUTURE-PROOF
PROFESSION**

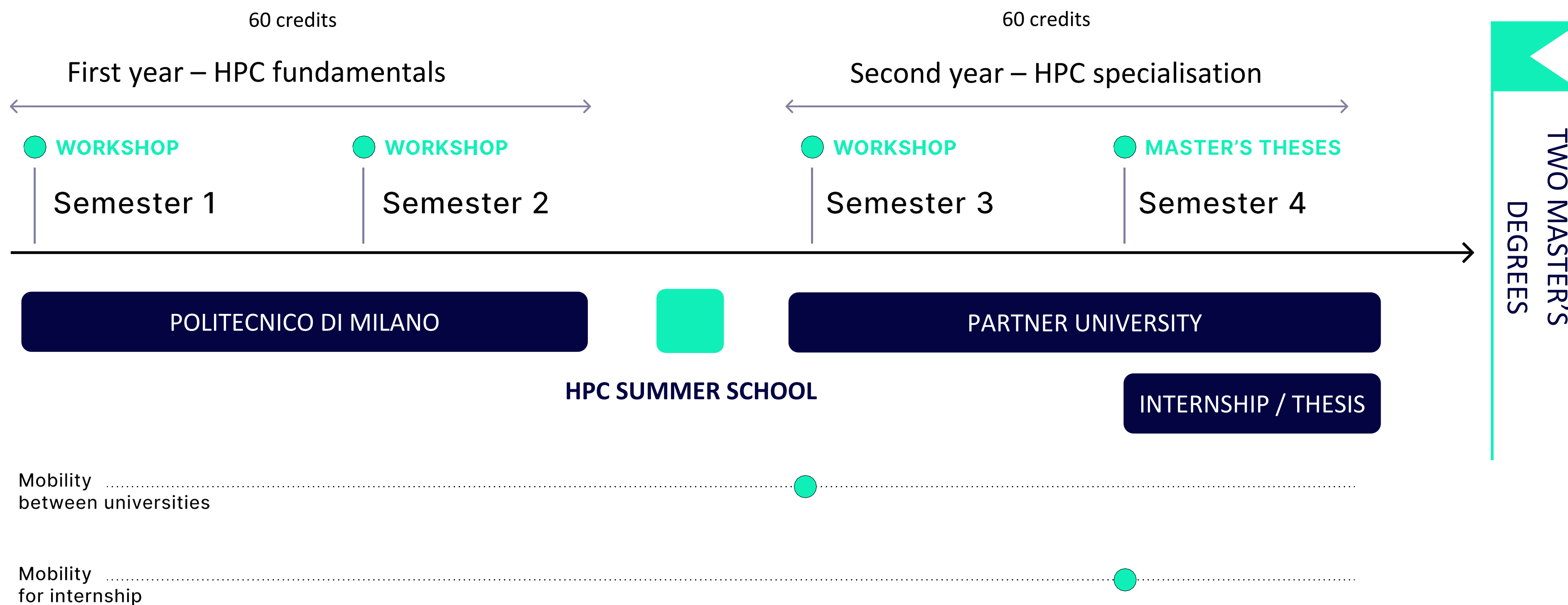
Scholarship

Summer school

Workshops

Academic excellence

ACADEMIC JOURNEY



SUMMER SCHOOL

THE AIMS OF THESE ACTIVITY ARE:

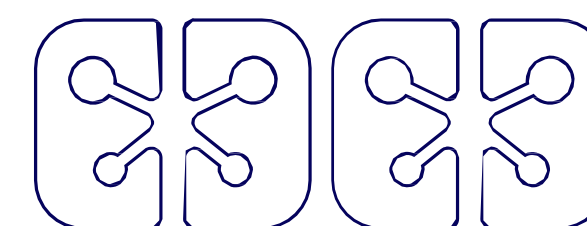
LEARNING

- Two weeks of intensive and high-level lectures, project work and collaboration, company cases on a specific chosen HPC topic
- Immersion of students in the subject of the specialty (3rd semester)

AND TO HAVE FUN :)

NETWORKING

- Meet the community of future HPC specialists and the like-minded people
- Meet the representatives of companies and supercomputer centers
- Exchange experiences with students and create connections for internships and/or future hires



INTERNSHIP IN INDUSTRY AND SUPERCOMPUTING CENTERS

You will gain a quickly practical experience through internships at partner companies and access to Europe's advanced HPC infrastructure

INDUSTRY IS A MAJOR PARTNER OF EUMASTER4HPC

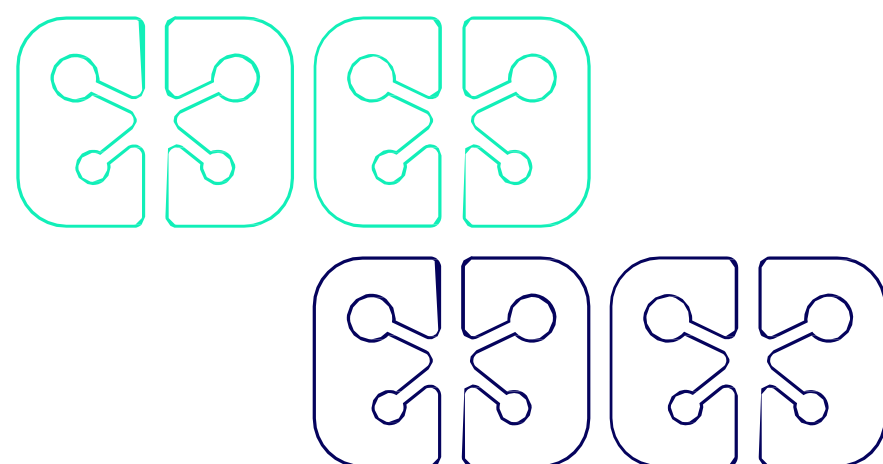


LEARNING OUTCOME

NEXT GENERATION OF HIGHLY SKILLED HPC EXPERT

Cutting-edge knowledge in

- Mathematical modeling and Statistics
- Software Engineering
- Parallel Programming
- Computer Architecture



HIGHLY DEVELOPED SOFT SKILLS

OWN NETWORK IN HPC COMMUNITY

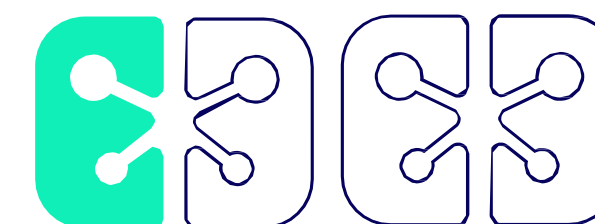
**ABILITY TO DEVELOP RESEARCH TOPICS &
WRITE PROPOSALS**

**CRITICALLY EVALUATE THE PROBLEM &
ANALYSIS SKILLS**

SCHOLARSHIP AND TUITION FEES

All the eligible students (= citizens of EU Member States and JU Associated Countries*) admitted to the programme will be granted:

- **5.000 € of Scholarship per year (max 2 years, 10.000 € overall)**
- **Exemption from university fees at both universities for 2 years**



*Students coming from Member States and Associated Countries that have chosen to become members of the Joint Undertaking and who comply with the programme requisites: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey



BE AMONG THE FORWARD-THINKERS AND INNOVATORS OF TOMORROW!

Contacts

Federico Schiepatti

Email

federico.schiepatti@polimi.it

Telegram

@fedeschi

