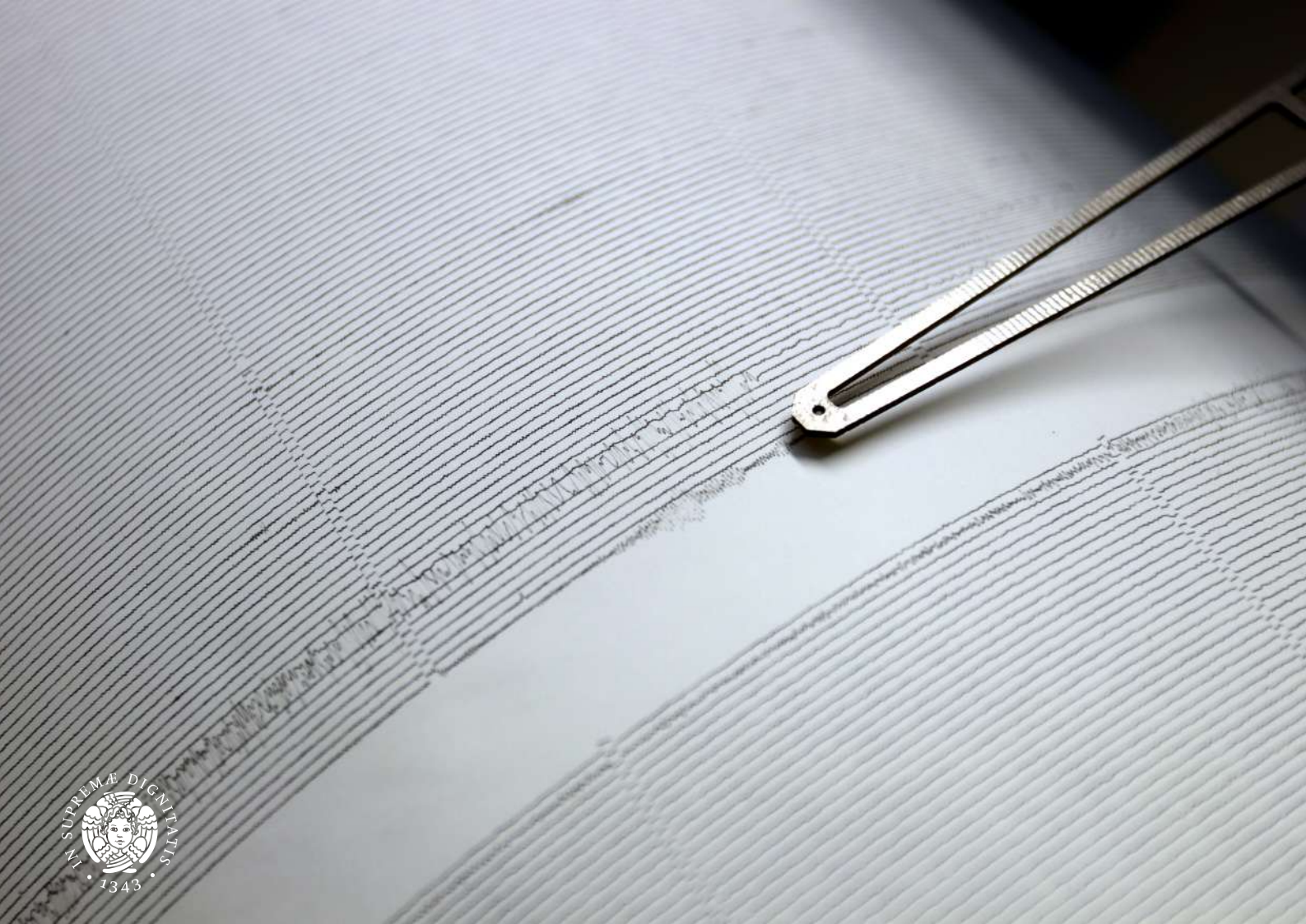

Università di Pisa
M.Sc. in Exploration and Applied Geophysics
Journey to the Center of the Earth
The M.Sc. in Exploration and Applied Geophysics of the University of Pisa

# The University of Pisa

The **University of Pisa** (UniPi) is a public university located in one of the most iconic Italian cities. UniPi is composed of twenty departments, with high level research centres covering all subject areas.

Established in 1343, UniPi is one of the most prestigious Italian higher education institutions and a modern centre for teaching and advanced research. Famous alumni of the University include **Galileo Galilei** and **Antonio Pacinotti**, along with Nobel Prize winners such as **Giosuè Carducci** (Literature), **Enrico Fermi** (Physics) and **Carlo Rubbia** (Physics), and the Fields Medal (Mathematics) **Alessio Figalli**.

With a student population surpassing 54,000 students, UniPi offers a large number of degree programs held in English and a variety of exchange programs with the most prestigious international universities.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# What is Geophysics?

**Geophysics** is the field of Earth Sciences focusing on the study the physical processes, such as earthquakes and volcanic eruptions, and physical properties of the Earth interior. By combining seismic, gravitational, magnetic, electrical and electromagnetic investigation methods with knowledge of geology, engineering and computer sciences geophysicists are able characterize the Earth's subsurface across different scales.

Geophysics plays a central role in the solution of many important societal challenges such as: the search of **natural resources and renewable energy sources**, the **contrast to climate change**, the **mitigation of natural hazards**, and the study of natural phenomena such as **earthquakes and volcanic eruptions.**

Geophysical skills are also requested in many engineering, environmental, geological and archaeological applications and in any geoscience application requiring the quantitative analysis of large datasets.


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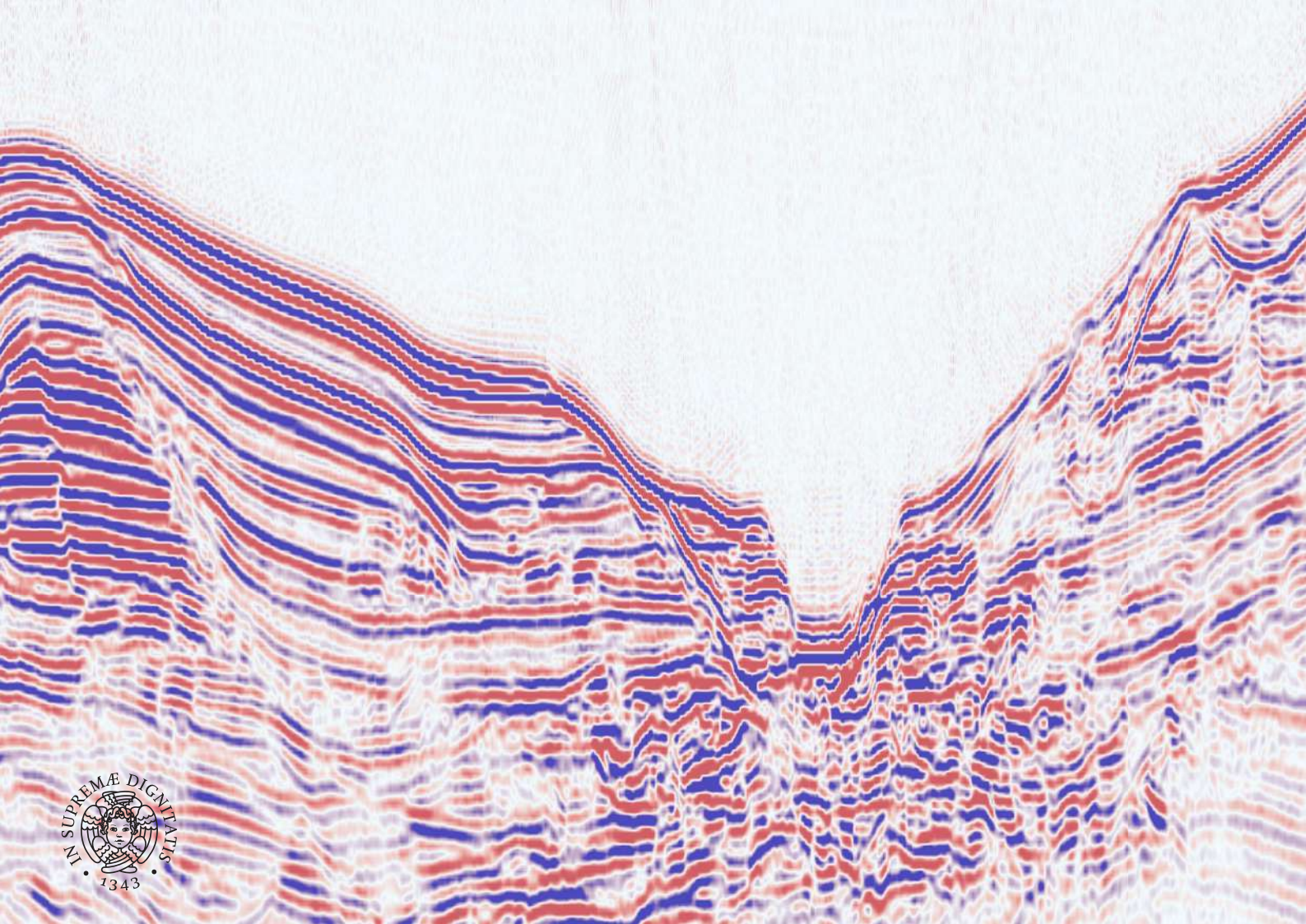
# The M.Sc. in Exploration and Applied Geophysics @UniPi

The Master of Science (M.Sc) in **Exploration and Applied Geophysics** at UniPi is designed to train next-generation geophysicists able to face and solve different types of geophysical, geological, and engineering problems in a broad range of contexts.

Our graduates will be able to master the main geophysical techniques (**seismic, gravitational, magnetic, electrical and electromagnetic methods**) for different kind of applications, to set up laboratory experiments and to work with the most recent data acquisition technologies (e.g. fiber-optics for seismological applications).

Last but not least, the solid **computational and numerical skills** that our M.Sc program provides will allow our students to model complex natural processes (such as **earthquakes** and **volcanic eruptions**) analyze large and heterogeneous geophysical datasets and use the most recent AI techniques.

For more info look at the QR code: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# What you will study

The M.Sc in Exploration and Applied Geophysics is open to students with a B.Sc in Geosciences, Physics or Engineering. In order to obtain the degree they have to complete a 2 years-long (full-time) study path and reach 120 ECTS.

Within the M.Sc degree in Exploration and Applied Geophysics we offer **three main study paths** with different focus and aims.

**Exploration Geophysics**: Here you will mainly study subjects related to geophysics for the exploration of georesources and the monitoring of CCUS.

**Applied Geophysics**: Here you will mainly study subjects related to geophysics for environmental monitoring, near surface and engineering investigations.

**Earthquake and Volcano Physics**: Here you will mainly study subjects aimed to better understand natural phenomena such as earthquakes and volcanic eruptions.

For more info look at the QR code:


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## Theory and Practice

The students of our M.Sc program acquire:

A **solid scientific background** in geology, physics, mathematics, and computer science;

**Advance knowledge of physics and geology** aimed at understanding large and small-scale natural phenomena through geophysics;

**Advanced computational skills**, with a particular focus on the analysis of geophysical data;

A **deep theoretical and practical knowledge** of the main geophysical survey methods (including a dedicated field campaigns).


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# International mobility

The Master in Exploration and Applied Geophysics is an international course developed in collaboration with the Milan Polytechnic University and is offered entirely in English.

Since 2019 we offer a Double Degree (Joint Master) with the **Montan University of Leoben** (Austria). To obtain the Double Degree program it is necessary to acquire 24 ECTS in the host university and the thesis must be done with a supervisor and co-examiner from both institutions.

In addition we also formalized Erasmus agreements with the **Institute of Geophysics of the University of Hamburg** (Germany) and the **Department of Geosciences of the University of Aarhus** (Denmark).

For more info look at the QR code:

## Our numbers

The M.SC in Exploration and Applied Geophysics of the University of Pisa has been **jointly founded with the Milan Polytechnic** in 2006.

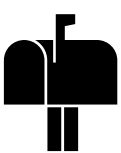
Our students come from all around the world: Europe (**70%**), Africa (**10%**), Asia (**15%**), America (**5%**).

More than **90%** of the students successfully complete the degree and more than **85%** graduates on time.

Until now about 150 students completed our M.Sc and more than **90%** of them work worldwide in the industry (**75%**) and academia (**25%**).

Our industry partners offer **short and long term internships**, and **dedicated training programs**.

For more info please contact **gea@dst.unipi.it** and/or visit our web site at the following link: **https://www.dst.unipi.it/home-wgf.html**.

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https://www.federicotovoli.com