

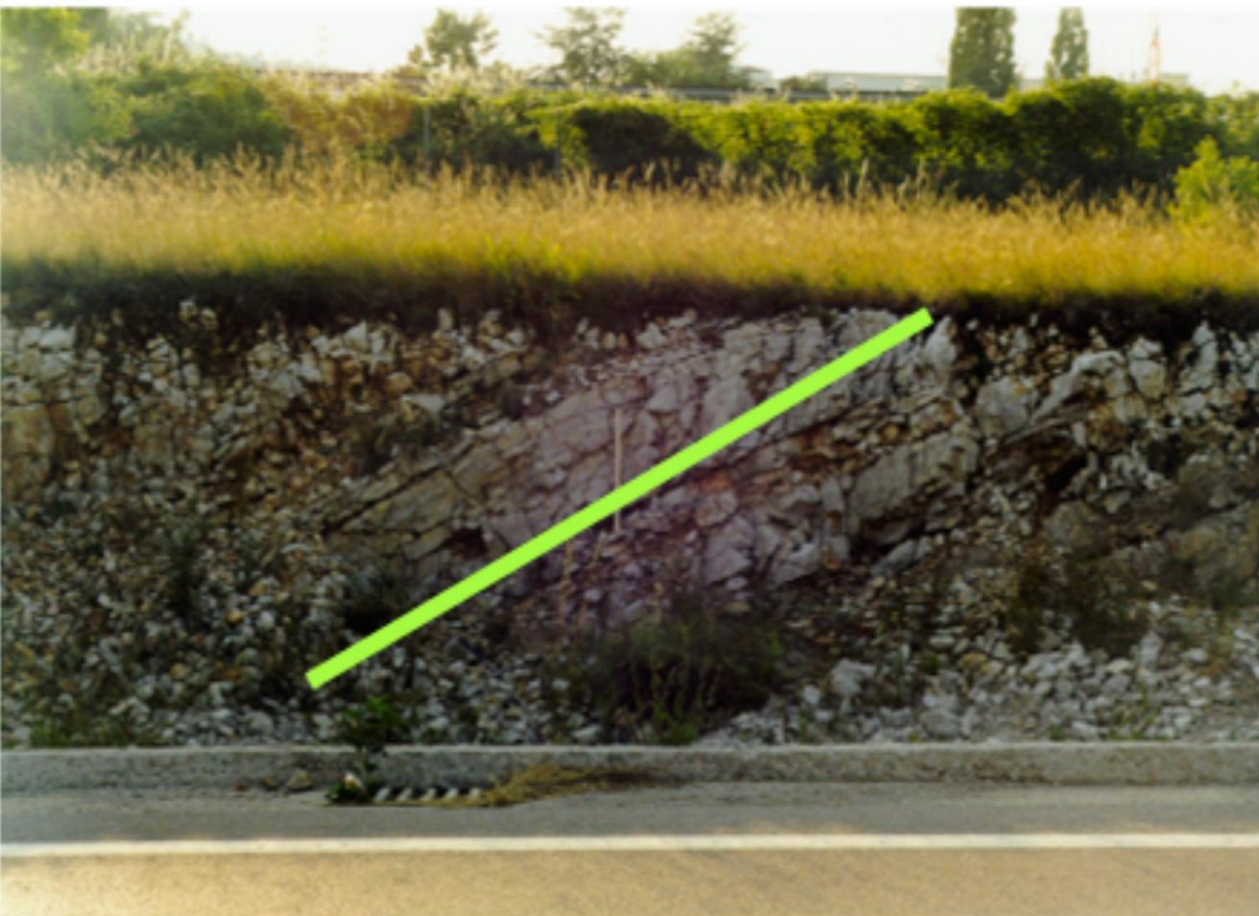


UNIVERSITÀ
DEGLI STUDI
DI TRIESTE



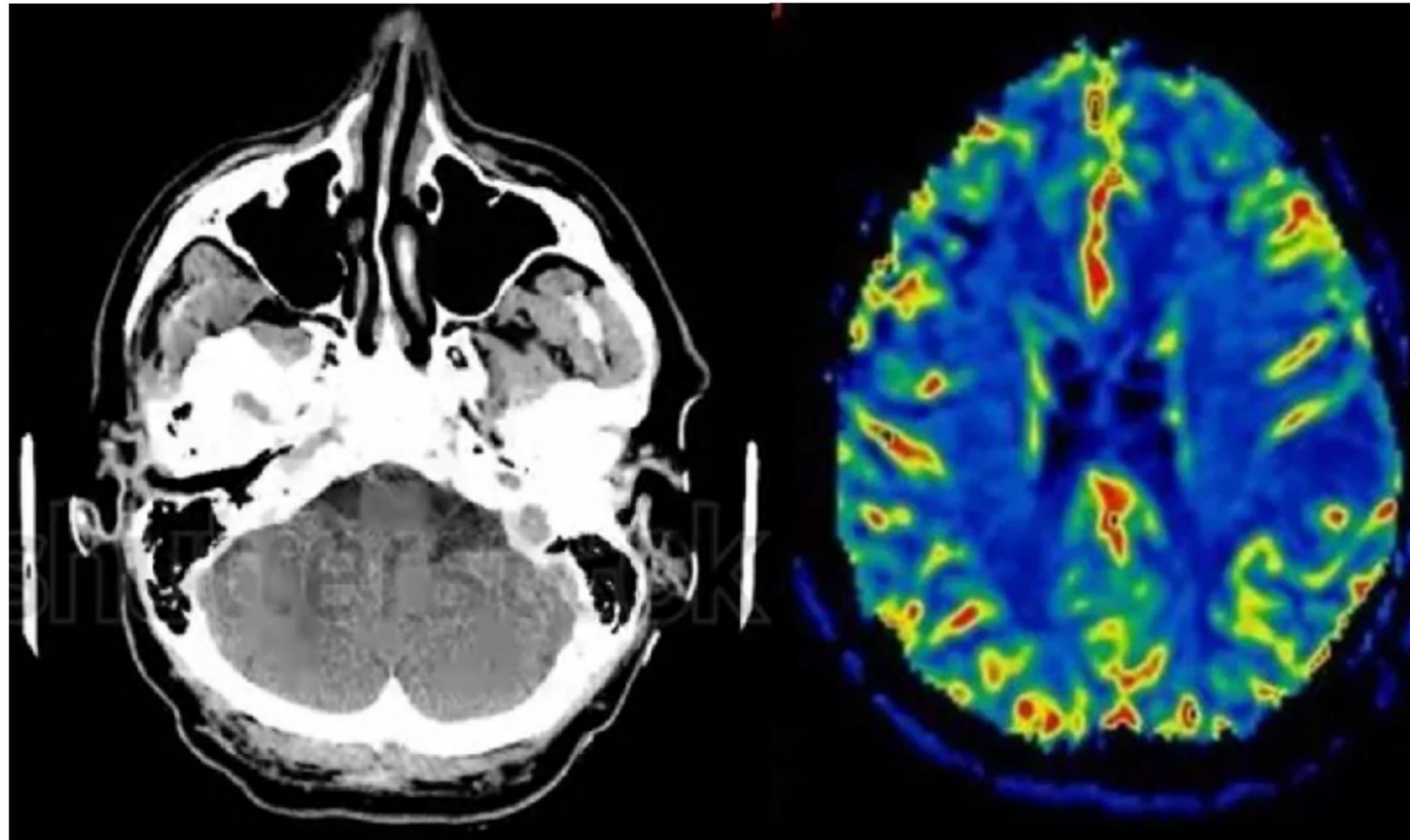
GEOFISICA E GEODATI

GEOPHYSICS: THE ONLY TOOL WE HAVE TO EXPLORE THE EARTH'S INTERIOR



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..as in non-invasive diagnostics and biomedical imaging



GEOPHYSICS: THE ONLY TOOL WE HAVE TO EXPLORE THE EARTH'S INTERIOR

A Geophysicist must be able to:

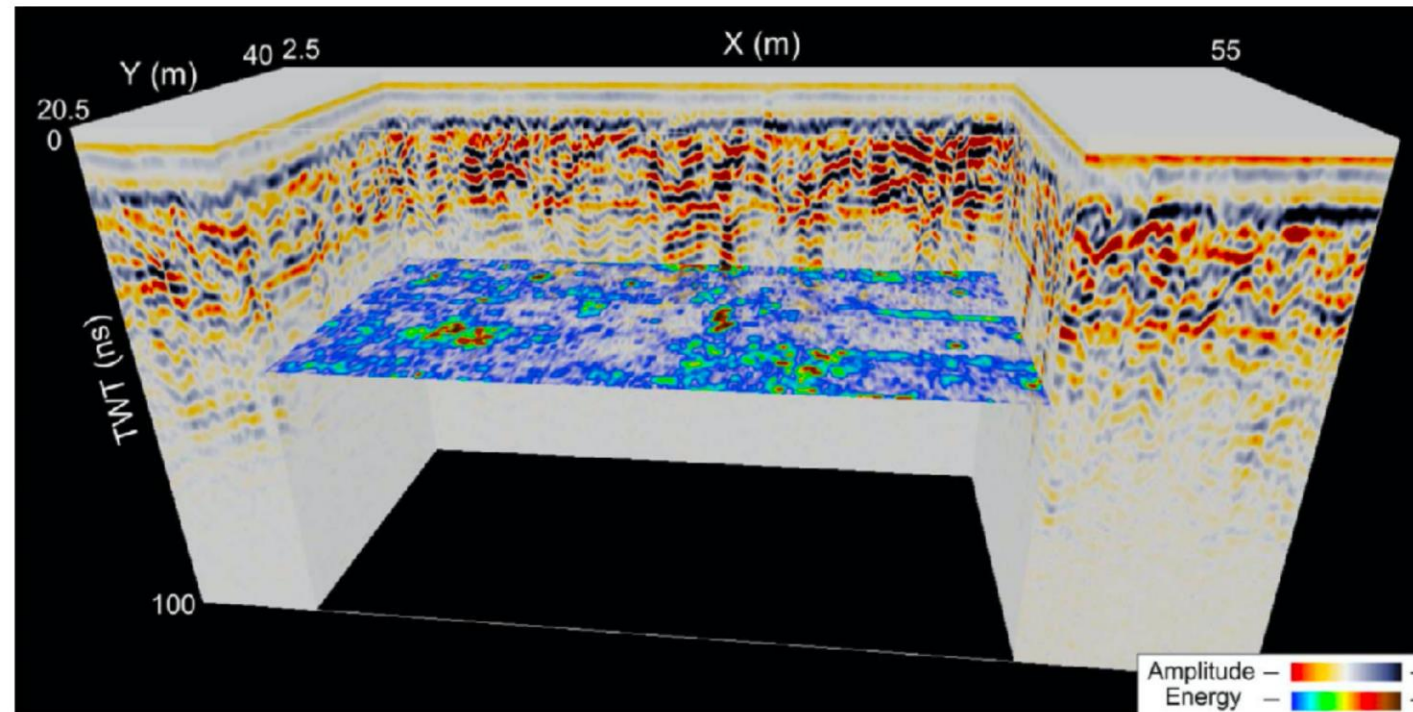
- Design and perform data acquisition with different instruments and techniques
- Analyze and process data
- Perform numerical modeling and inversion
- Interpret the data

TO....



GEOPHYSICS: THE ONLY TOOL WE HAVE TO EXPLORE THE EARTH'S INTERIOR

...understand structure, physical properties and evolution of the Earth's interior
and to solve challenging scientific and technological problems



GEOPHYSICS AND GEODATA

The degree is offered by the following Departments of University of Trieste:

Mathematics and Geosciences

Physics

Engineering & Architecture



UNIVERSITÀ DEGLI STUDI DI TRIESTE

Dipartimento di Matematica e Geoscienze



UNIVERSITÀ DEGLI STUDI DI TRIESTE

Dipartimento di Fisica



UNIVERSITÀ DEGLI STUDI DI TRIESTE

Dipartimento di Ingegneria e Architettura

in cooperation with

<https://www.inogs.it/>

<https://www.ictp.it/>

<https://www.eni.com>



The Abdus Salam

International Centre
for Theoretical Physics

OGS

Istituto Nazionale
di Oceanografia
e di Geofisica
Sperimentale

with the support of national and international research institutions and companies of the geophysical sector (such as Eni, Shearwater, Halliburton)

SHEARWATER

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

Language: English Duration: 2 years

Possible specializations in:

- Solid Earth Geophysics, Geodynamics, Potential methods
- Seismology
- Exploration Geophysics
- Fluid Mechanics
- Computational geophysics

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

Course structure

CORE COURSES:

Exploration seismology - Potential methods - Seismology
Introduction to machine learning - Fluid dynamics

COMPLEMENTS:

Essential mathematics
Essential Physics
Essential Geology



for Geophysicists

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

Course structure

CHOICE OF SPECIALIZATIONS AMONG COURSES OF THE FOLLOWING SECTORS:

GEOPHYSICS (13)

GEOLOGY (9)

PHYSICS (5)

ENGINEERING/FLUID MECHANICS (4)

MATHEMATICAL METHODS/SCIENTIFIC COMPUTING/GEODATA
SCIENCES (9)

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

WHO CAN ENROLL?

Students with a science-technology degree, preferably but not limited to Geology, Physics, Engineering. Admission based on titles and interview.

SCHOLARSHIPS

Available through the Collegio Fonda.

LECTURES, INTERNSHIPS, THESIS WORK

Lessons will be held in Trieste, internships and thesis work can be organized on a vast network of research institutions and companies. Lectures and seminars held by internationally renowned experts are regularly organized as part of the activities of the local Student Chapter of the Society of Exploration Geophysicists.

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

TUTORING AND ASSISTANCE FOR WORK PLACEMENTS

Each student will have a personal tutor from enrollment who will help in the design of the training path, in the choice of available courses, internship opportunities, thesis topics and international mobility programs.

Recruitment events are periodically organized in Trieste with the major companies in the geophysical sector.

Internships are foreseen in national and foreign companies and institutions also with the support of the University or European mobility programs.

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

JOBS FOR GEOPHYSICISTS

INDUSTRY

PROFESSIONAL ACTIVITY

RESEARCH CAREER

PUBLIC AUTHORITIES

TEACHING

IN THE FOLLOWING FIELDS:

ENERGY AND NATURAL RESOURCES

ENVIRONMENT, CLIMATE CHANGE and
GREEN DEAL

SCIENTIFIC EXPLORATION OF THE EARTH'S
INTERIOR

NATURAL AND ANTHROPIC HAZARDS

GEODATA SCIENCE AND SCIENTIFIC
COMPUTING

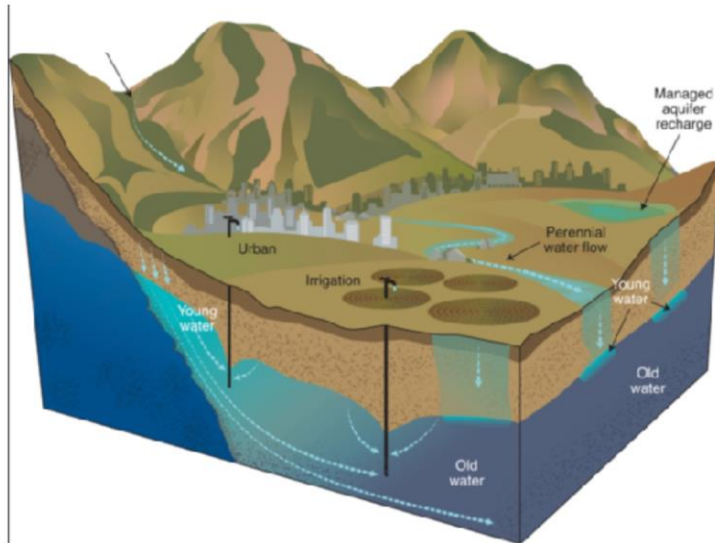
FLUID MECHANICS AND RELATED TOPICS

....AND MUCH MORE....

INTERNATIONAL MASTER PROGRAM IN GEOFYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

ENERGY AND NATURAL RESOURCES such as



WATER

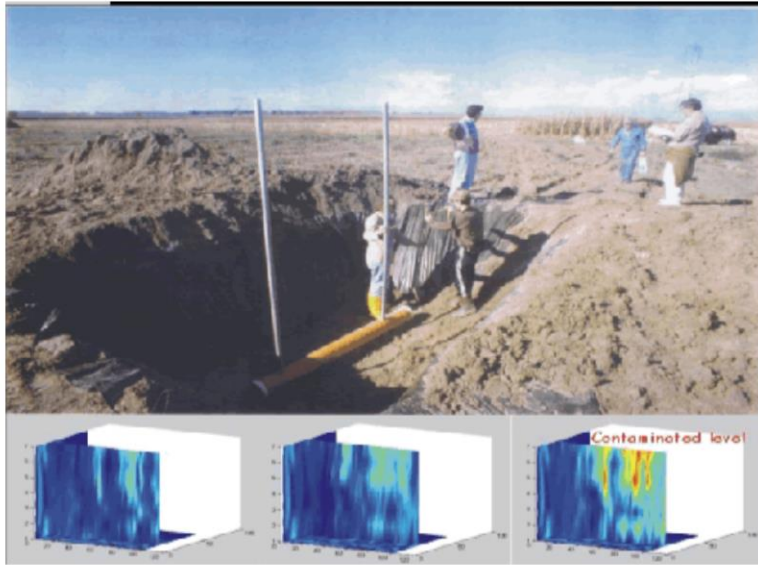
GEOHERMAL HEAT

MINERALS AND FOSSIL
FUELS

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

ENVIRONMENT, CLIMATE CHANGE and GREEN DEAL



GLACIOLOGY & EFFECTS OF
CLIMATE CHANGE

SOIL AND WATER
CONTAMINATION

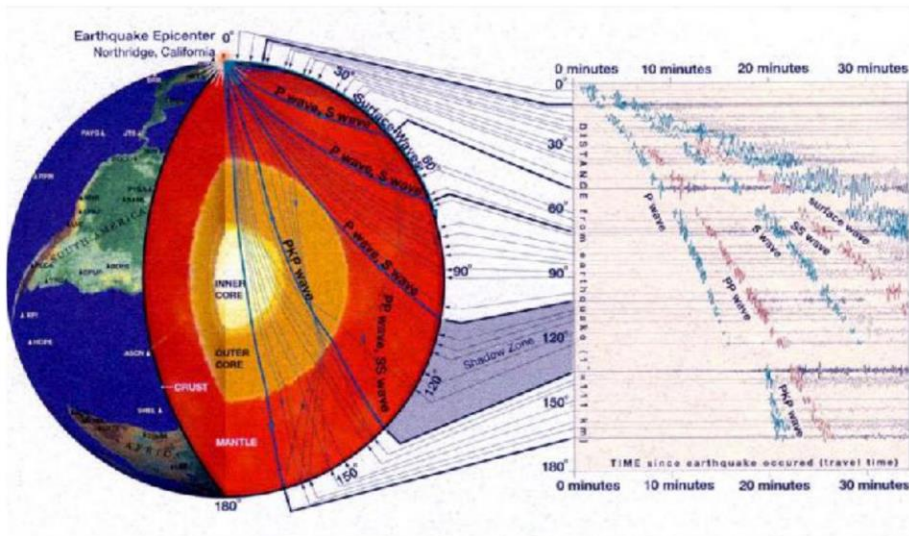
CARBON CAPTURE AND
STORAGE

MITIGATION OF THE EFFECTS
OF HUMAN ACTIVITIES

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

PLANET'S INTERIOR AND NATURAL HAZARDS



EARTHQUAKES

GEODYNAMICS

DEEP PLANETARY
EXPLORATION

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

FLUID MECHANICS AND RELATED TOPICS



Environmental sciences (dispersion of pollutants in water and air)

Ecology (fluid biological species interaction)

Physical oceanography

Physical of the atmosphere

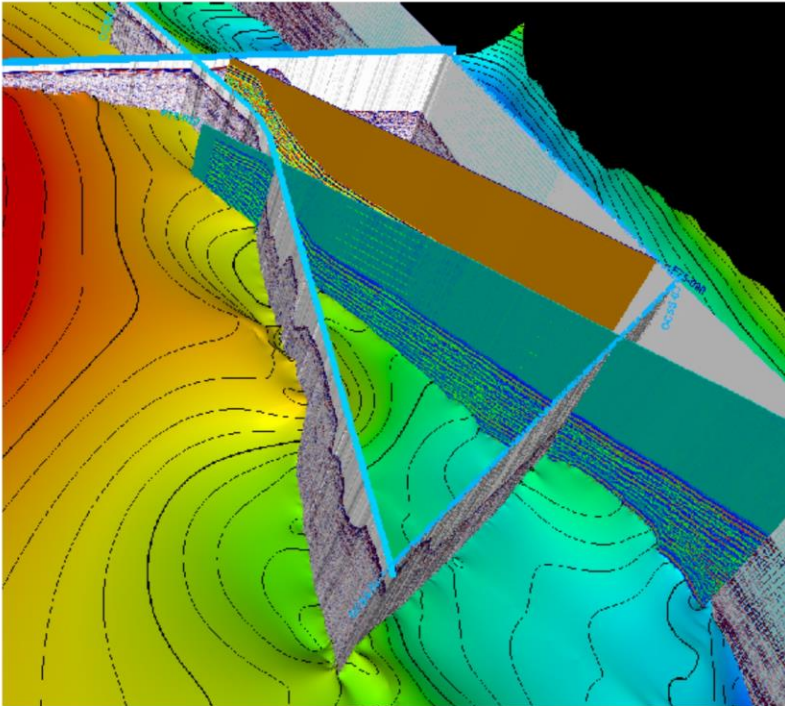
Turbulence in geophysics

Transport of liquid in porous media

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

SCIENTIFIC EXPLORATION

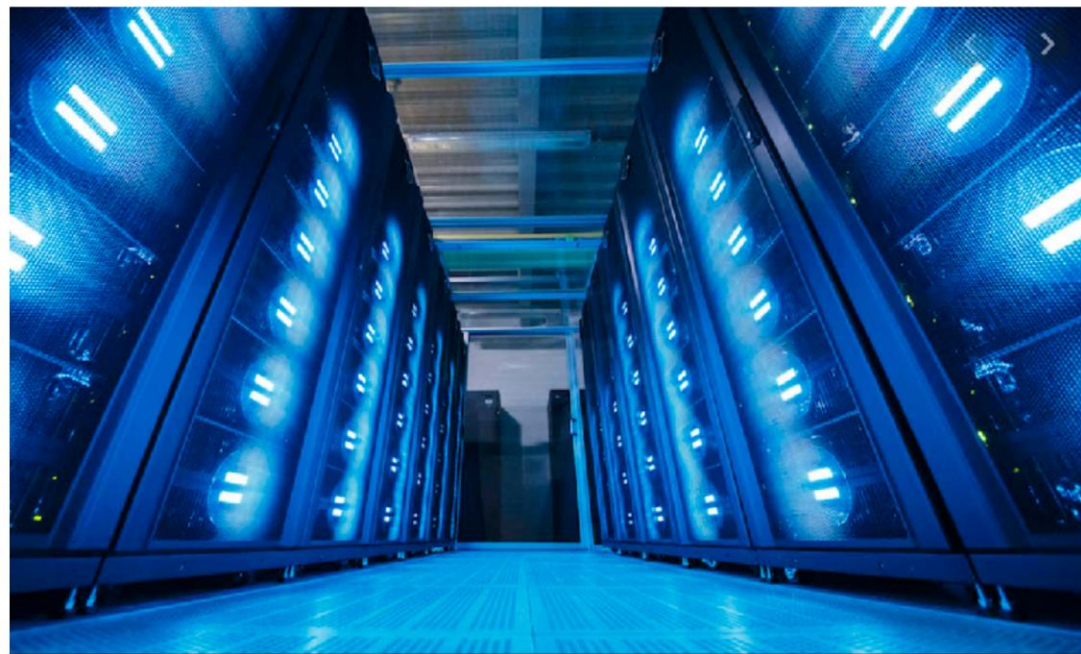


STUDY OF STRUCTURE, PHYSICAL PROPERTIES AND EVOLUTION OF THE EARTH'S CRUST WITH A WIDE RANGE OF POSSIBLE APPLICATIONS (such as e.g. geology, engineering, archaeology, forensic science, glaciology...)

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

GEODATA SCIENCE AND SCIENTIFIC COMPUTING



PROCESSING, MODELING, INVERSION
AND INTERPRETATION
OF GEOPHYSICAL DATA

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

FIELDS OF APPLICATION AND SPECIALIZATION

... AND MUCH MORE !!

SOUND AND IMAGE
PROCESSING

NON-DESTRUCTIVE
TESTING

FORENSIC AND CULTURAL
HERITAGE SCIENCE

BIO-MEDICAL IMAGING

.....

INTERNATIONAL MASTER PROGRAM IN GEOPHYSICS AND GEODATA

@University of Trieste we have a decades-long
tradition of high-level research and training in
Geophysics
and a large community of Alumni working
in Geophysics worldwide



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GEOPHYSICS
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**International Centre
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eni

geophysics-geodata.units.it

SHEARWATER



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DI TRIESTE**



www.units.it



UNIVERSITÀ
DEGLI STUDI
DI TRIESTE

Un mare di ragioni
per studiare a Trieste