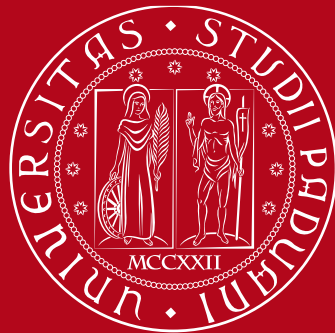


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DI PADOVA

University of Padua
and the Department of Geosciences



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8 CENTURIES OF ACADEMIC EXCELLENCE

- **ITALIAN WORLD-CLASS UNIVERSITY**
- **MULTIDISCIPLINARY AND INTERDISCIPLINARY**
- **RESEARCH-INTENSIVE**
- **BEST UNIVERSITY IN ITALY
FOR TEACHING AND RESEARCH QUALITY**
- **TOP 250 UNIVERSITY IN THE WORLD**

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THE UNIVER-CITY



City-campus

Student-centred town

Unique setting

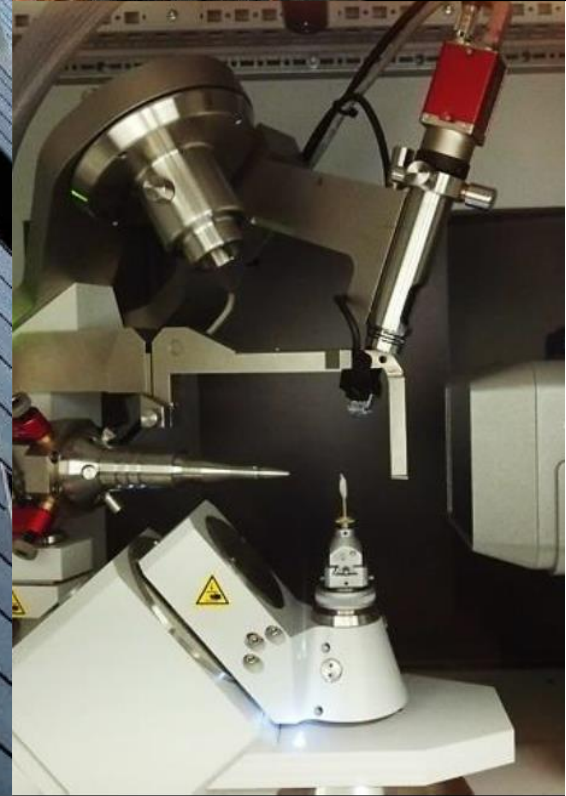
Strategic position

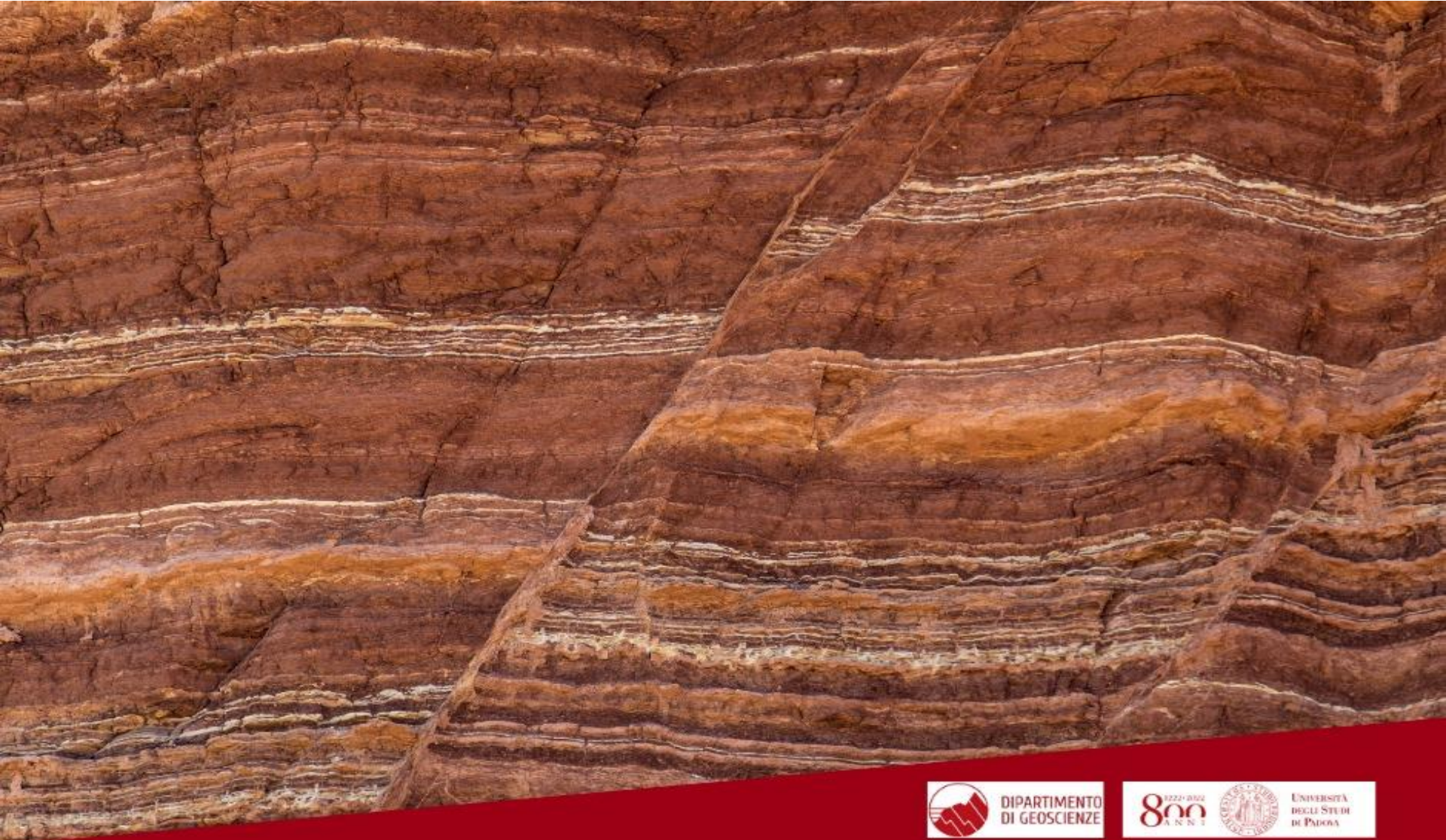
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The Department of Geosciences





DIPARTIMENTO
DI GEOSCIENZE



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**UNIPD RANKS FIRST IN ITALY FOR
EARTH AND MARINE SCIENCE**

15 Full Professors

30 Associate Professors

11 Assistant Professors

32 Post-doc Researchers (28% international)

33 PhD Students (27% international)

In A.Y. 2020/2021, the Department of Geosciences provided teaching to 172 students for the bachelor's degree in Geological Sciences and **83 students for the master's degree.**



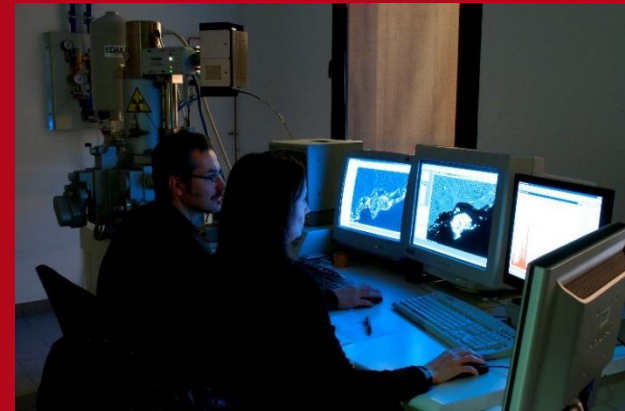
The Department of Geosciences

The professorial and research faculty of the Department of Geosciences covers the **whole array of the Earth Sciences**, comprising:

- Paleontology
- Stratigraphy
- Sedimentology
- Structural geology
- Geomorphology
- Quaternary Geology
- Engineering geology
- Hydrogeology
- Mineralogy
- Petrology
- Geochemistry
- Georesources
- Planetary Geology
- Applied Geophysics
- Geophysics of the solid Earth and the atmosphere



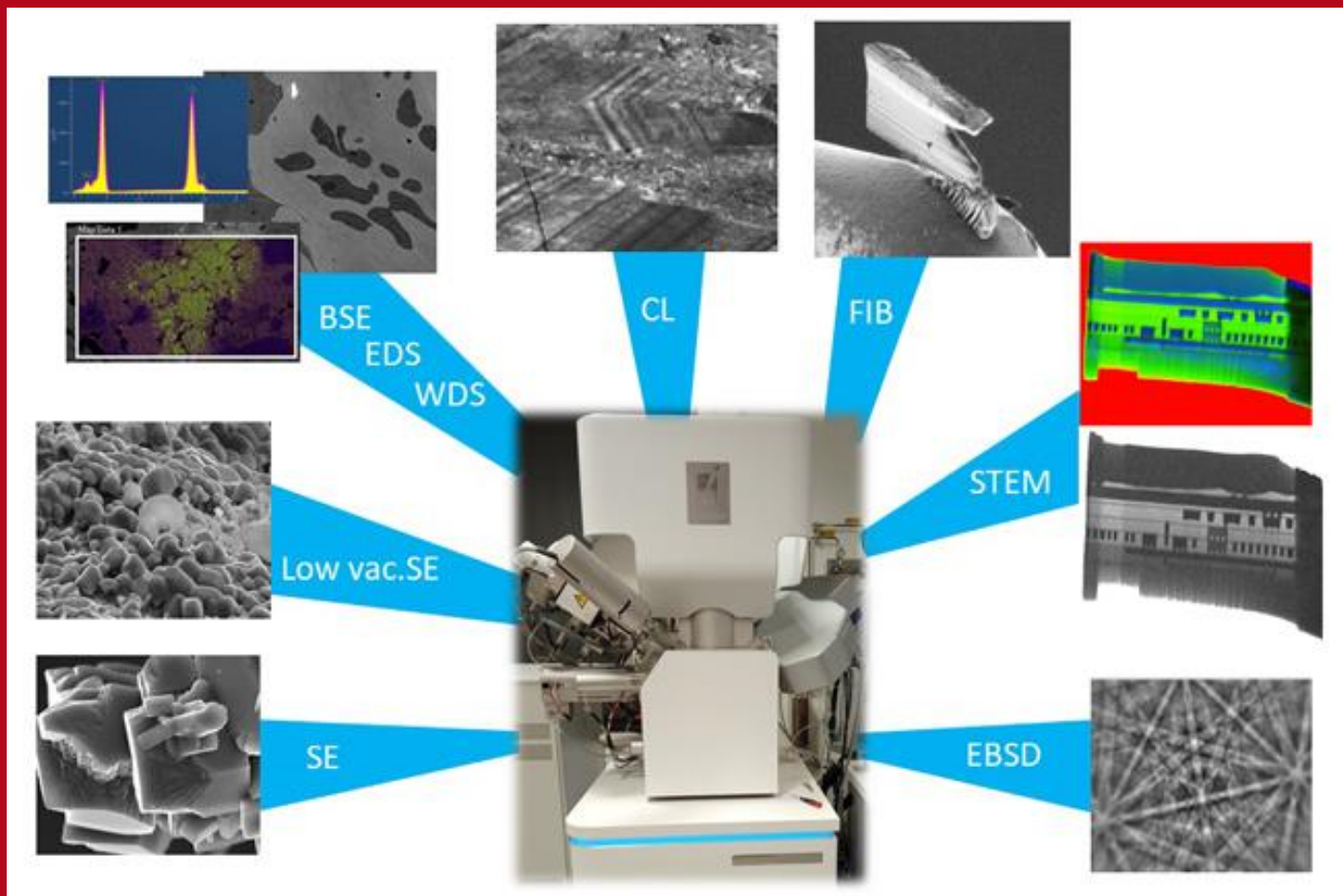
46 laboratories which support the research on most of the fields of Geosciences



The Department of Geosciences is the most equipped with experimental facilities in Italy and is competitive at international level.

The last instrumental acquisition campaign allowed us to buy a unique

FEG-SEM-FIB with WDS-EDS-EBSD systems



a unique WITec Raman system



and a new XRF system....



and this in addition to a long series of equipment....



X-ray powder diffraction lab



Single-crystal X-ray diffraction lab



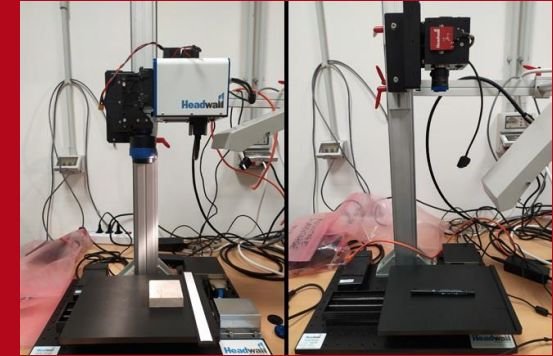
X-ray micro-tomography



Rock mechanics



Stable isotope mass spectrometry



Hyperspectral imaging



Drones....

1st YEAR, first semester

Two courses among

- Earth Surface Processes and Deposits
- Earth Interior and Evolution
- Past Life and Climates
- Geological Resources for Sustainable Development

Common course

- Quantitative Methods for Earth Scientists



1st YEAR, second semester

Three courses among:

- Carbonate Facies Analysis for Paleoclimate Reconstructions
- Basin Analysis
- Metamorphic Petrology
- **Mineral Processes and Applications**
- **Isotope Geochemistry**
- **Digital Geological Mapping**



2nd YEAR, first semester

Four courses among

- Rock Microstructures
- Exceptional Fossil Biotas and Mass Extinction
- Analysis of Mineral Resources and Industrial Derivatives
- Geology of Mountain Belts
- **Remote Sensing for Geosciences**
- **Planetary Geology**
- Quaternary Geology
- Anthropocene Sediments and Environments
- Coastal Environments under Climate Change

2nd YEAR, second semester: Internship and Thesis

Two additional courses are to be chosen among those available at the University of Padova, either in the 1st or 2nd year among which:

- **Physics of the Solar System,**
- **Exoplanetary astrophysics**
- **Planetary astrophysics**

To be potentially activated by 2023-2024 or 2024-2025:

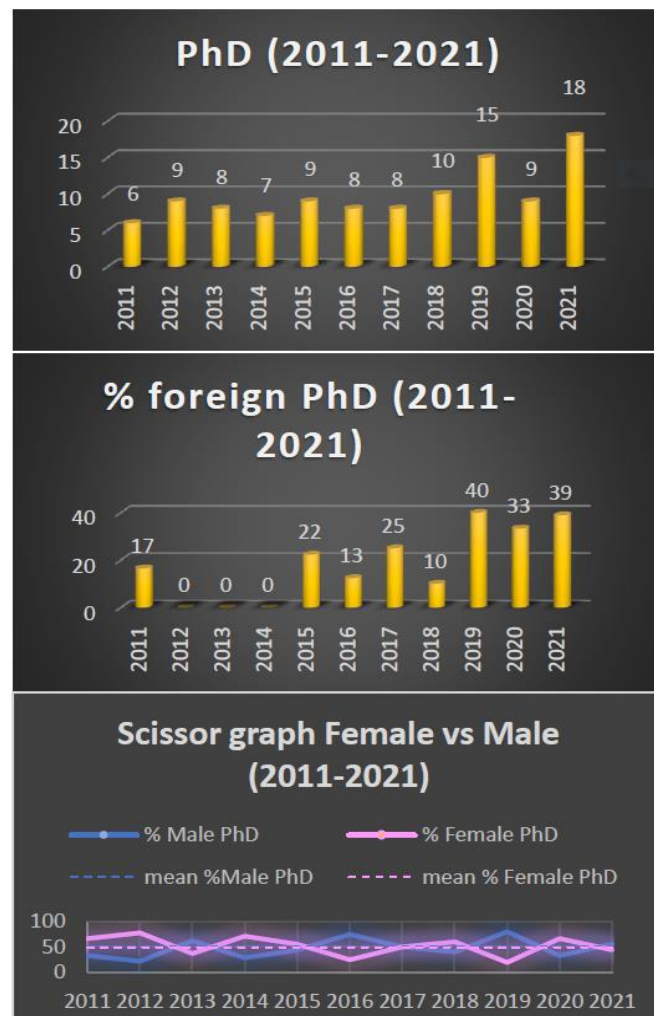
- **Cosmogeochimistry**
- **Astro-materials and ISRU**
- **Astrobiology**
- **Planetary Geological mapping**

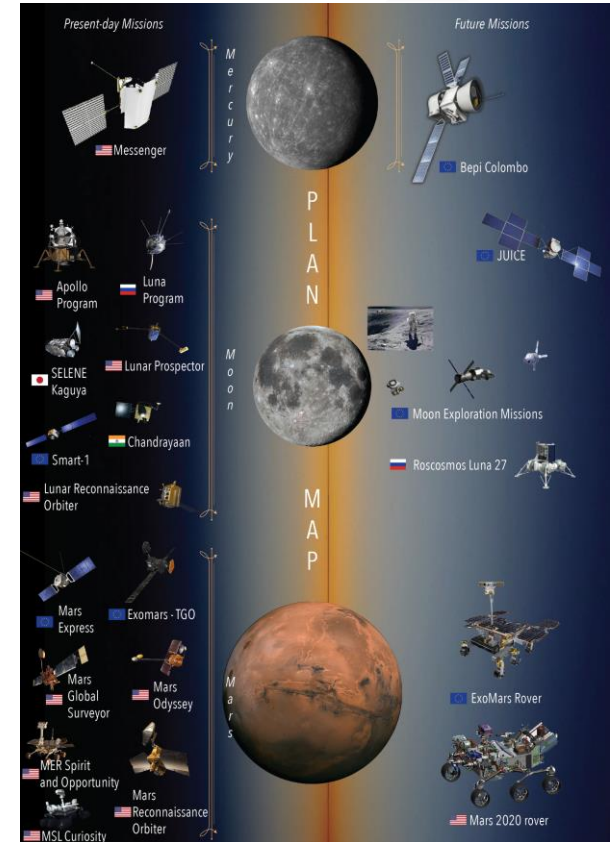
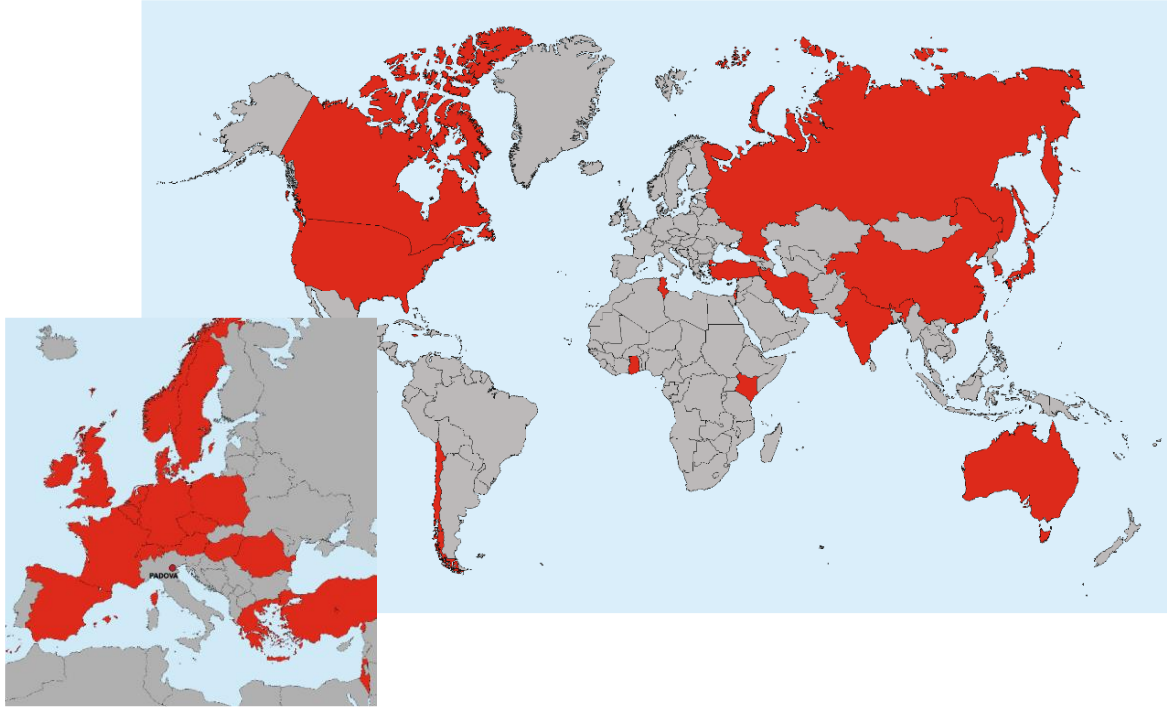
Admission requirements: a MSc degree, whatever is its length

Duration: Three years (the thesis evaluators can ask for an extension of 6 months)

Grant: The student is fully supported by the University of Padova for all the duration of PhD. In case of periods abroad, the salary is increased by 50%.

Joint supervision (cotutelle): Bilateral agreements establish duration of periods abroad, the plan of research, the board of examiners, etc.



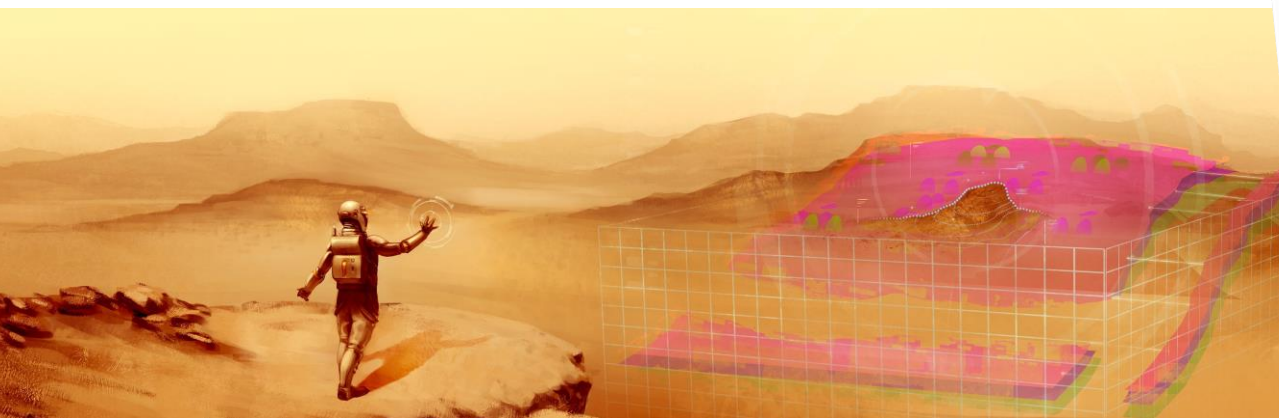


- **Planetary missions** (often with INAF):
 - Rosetta to comet 67P (past)
 - Bebi-Colombo to Mercury (operative)
 - EXO-Mars-TGO (with UNICH) (operative)
 - JUICE to Jupiter satellites (future)
 - Projects of robotic and crewed missions to the Moon (future)

PANGAEA (LPG-VR2 Planets) 



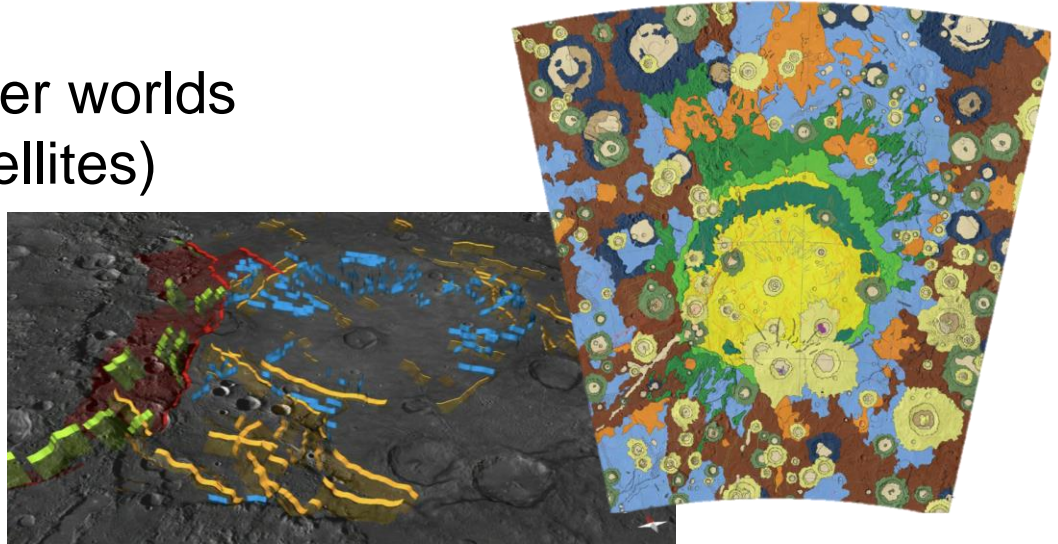
H2020 PLANMAP and Europlanet GMAP (UNICH-LPG)



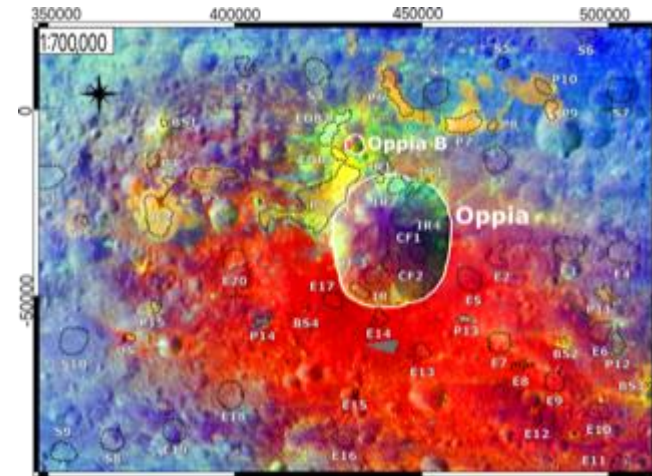
INTERSHIPS (LPG-NANTES)

Potential Internships

Mapping and modelling other worlds
(Mars, Mercury, Jupiter satellites)

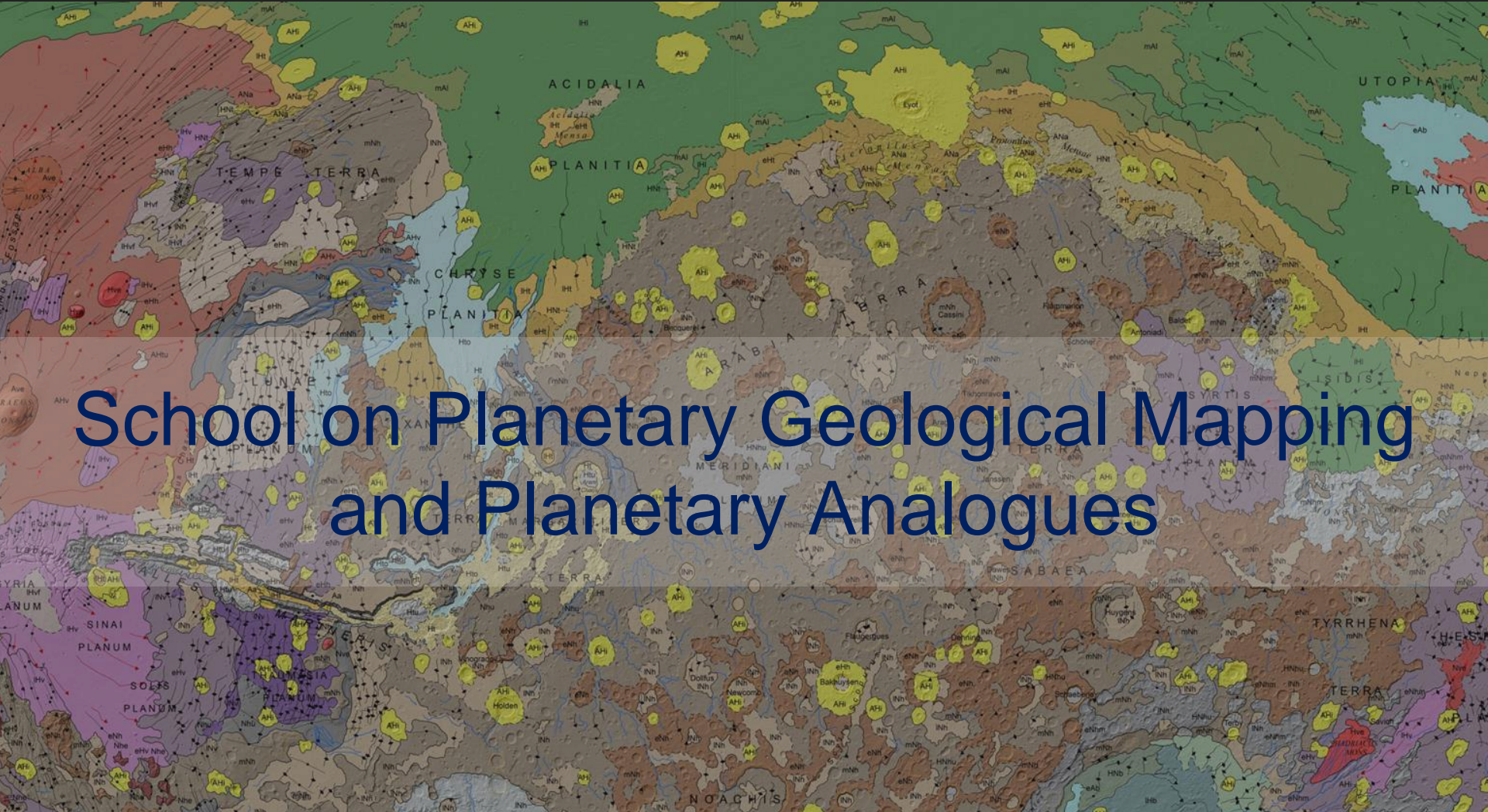


Understanding the composition of planetary
and minor body surfaces (with INAF)



Extraterrestrial Diamonds





School on Planetary Geological Mapping and Planetary Analogues

