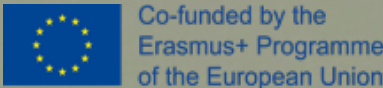




University of Coimbra in GeoPlaNet-SP



M. Alexandra Pais & João Fernandes, 16 June 2022

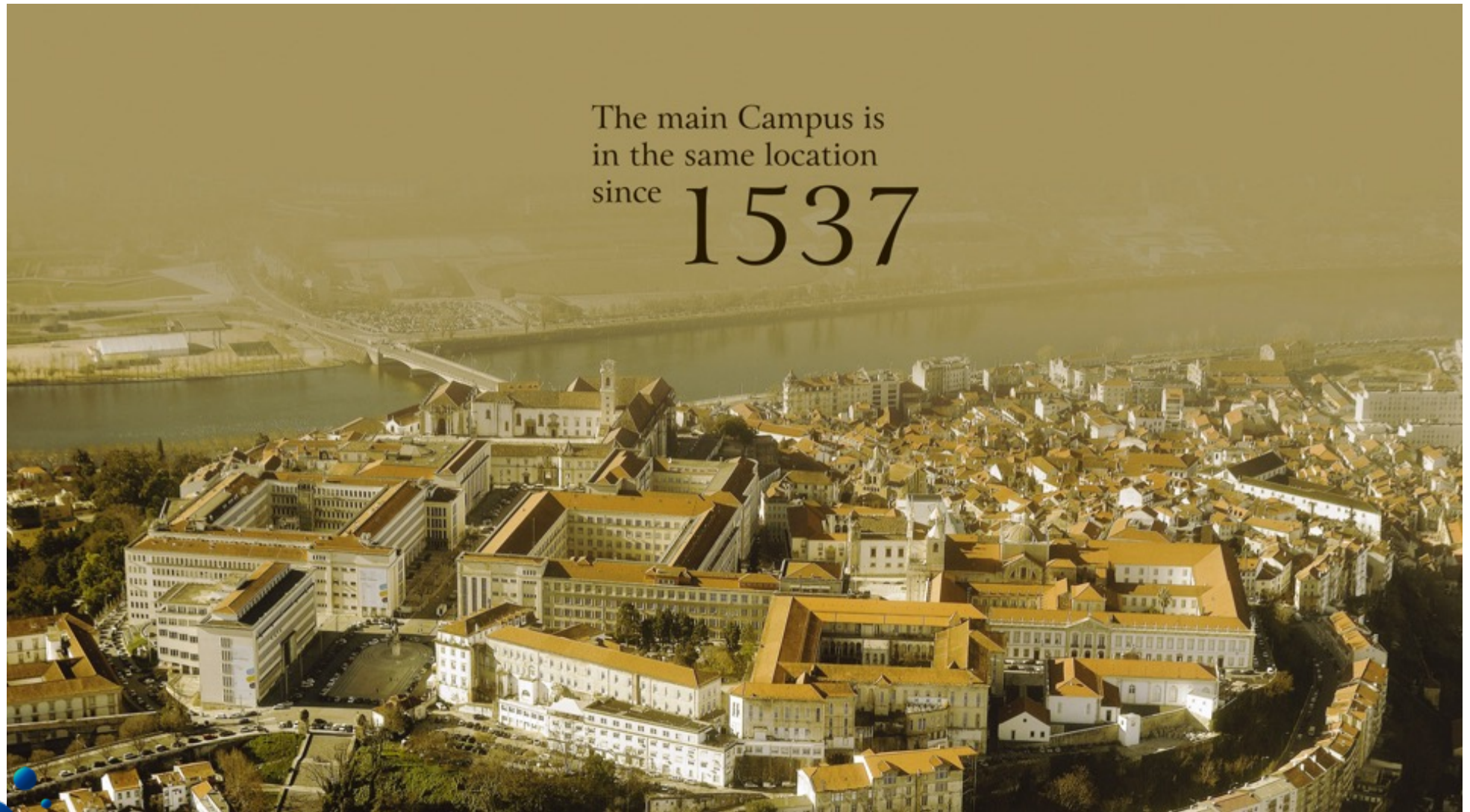


UNIVERSITÉ DE NANTES



VR2Planets

The main Campus is
in the same location
since **1537**

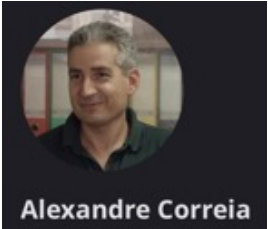
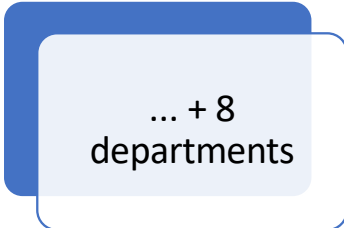
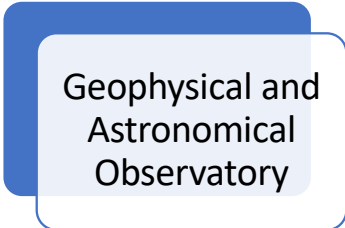
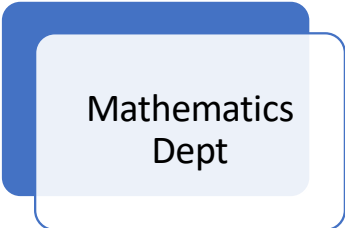
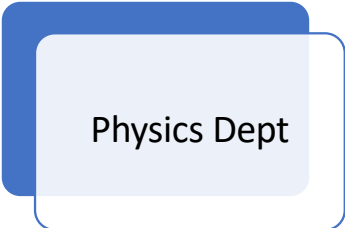
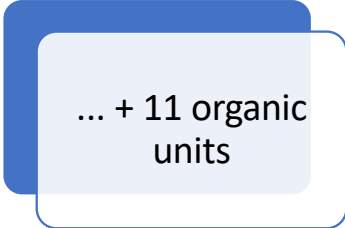
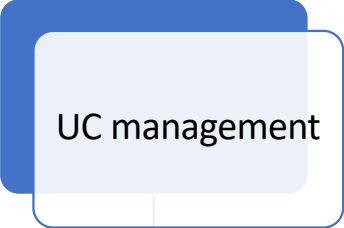
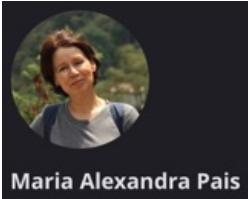




Some numbers

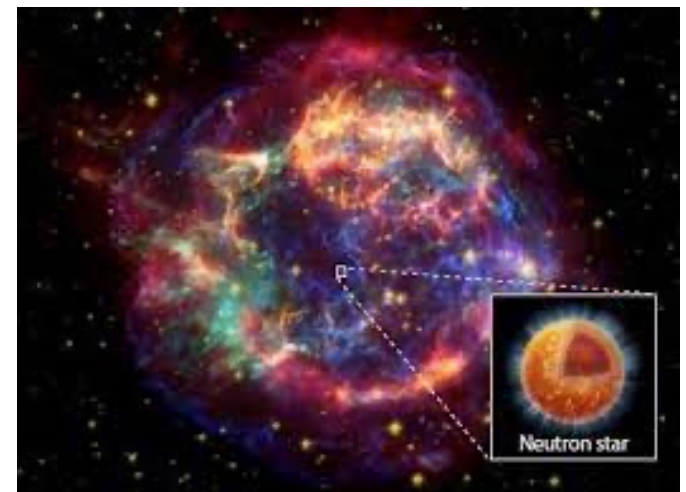


UC Organigram and the team



Physics Department

- Master in Astrophysics and Instrumentation for Space
 - Image processing/ Astrophysics/ Data acquisition systems / Planetary Sciences / Instrumentation for Space/ General Relativity and Cosmology/ Fluid Dynamics and MHD
- Research groups/centers:
 - Astrophysics and Cosmology
 - Space Instrumentation for Astrophysics
- Student projects supervision in collaboration w/ ESA



Mathematics Department

- Master in Astrophysics and Instrumentation for Space
 - Astronomy/ Positioning Systems/ Celestial Mechanics

- Master in Geospatial Information Engineering
 - Digital Cartography/ Geographic Information Systems/ Remote Sensing/ Positioning and Navigation Systems



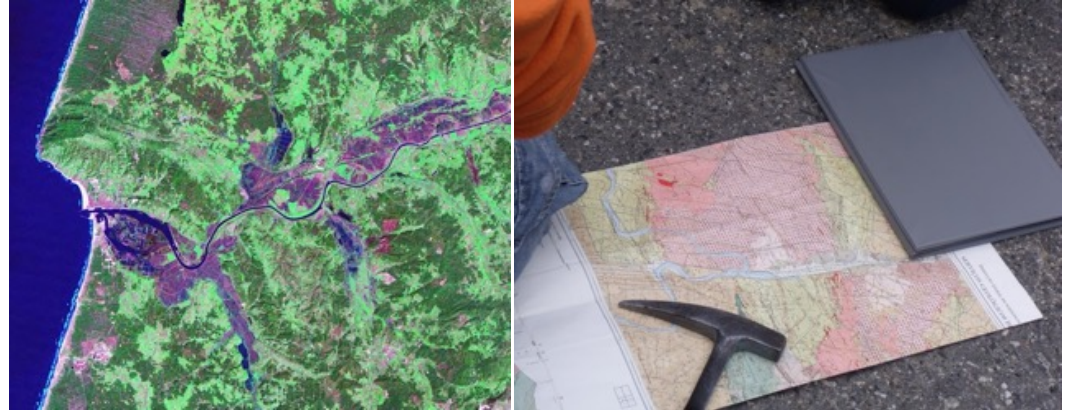
Astrophysics and Instrumentation for Space



Geospatial Information Engineering

Earth Sciences Department

- Master in Geosciences
- Fieldwork courses
- Digital Mapping, Remote Sensing, GIS
- Laboratories of Geophysics, Geochemistry, Ore Treatment; Sedimentary Geology and Fossil Record; Geochemical and X-Ray; Hydrogeology; Paleomagnetism; Petrography; Natural Radioactivity; Sedimentology



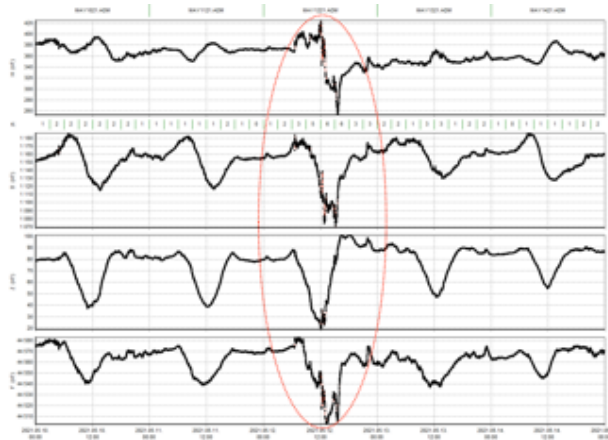
Geophysical and Astronomical Observatory



Observatório
Geofísico e Astronómico
da Universidade de Coimbra



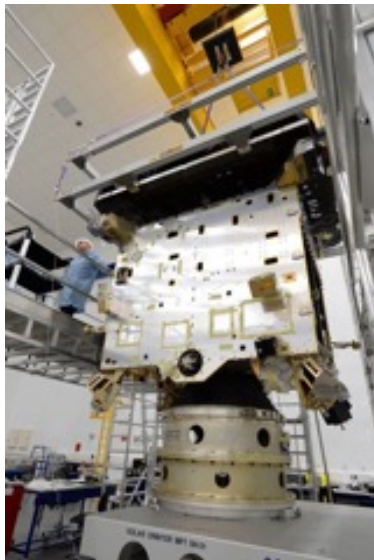
FACULDADE DE
CIÊNCIAS E TECNOLOGIA
UNIVERSIDADE DE
COIMBRA



- Sun and Earth observations:
 - images of the solar atmosphere
 - magnetic observatory
 - seismological station
 - meteorological station
- data provider
- science dissemination
- data analysis and interpretation
- two research centers:
 - CITEUC: center for earth and space research
 - IA: institute of astrophysics



Space-industry 'entourage'



- **IPN Incubator:** in close partnership with UC, supports technology-based startups.
- **ESA BIC Portugal:** offers technical, business and financial support to startups that use space technology for terrestrial applications.
- **Active Space Technologies:** former startup at IPN, now involved in a multitude of space mission projects through its competences in Mechanics, Electronics, Precision Manufacturing

GeoPlaNet-SP

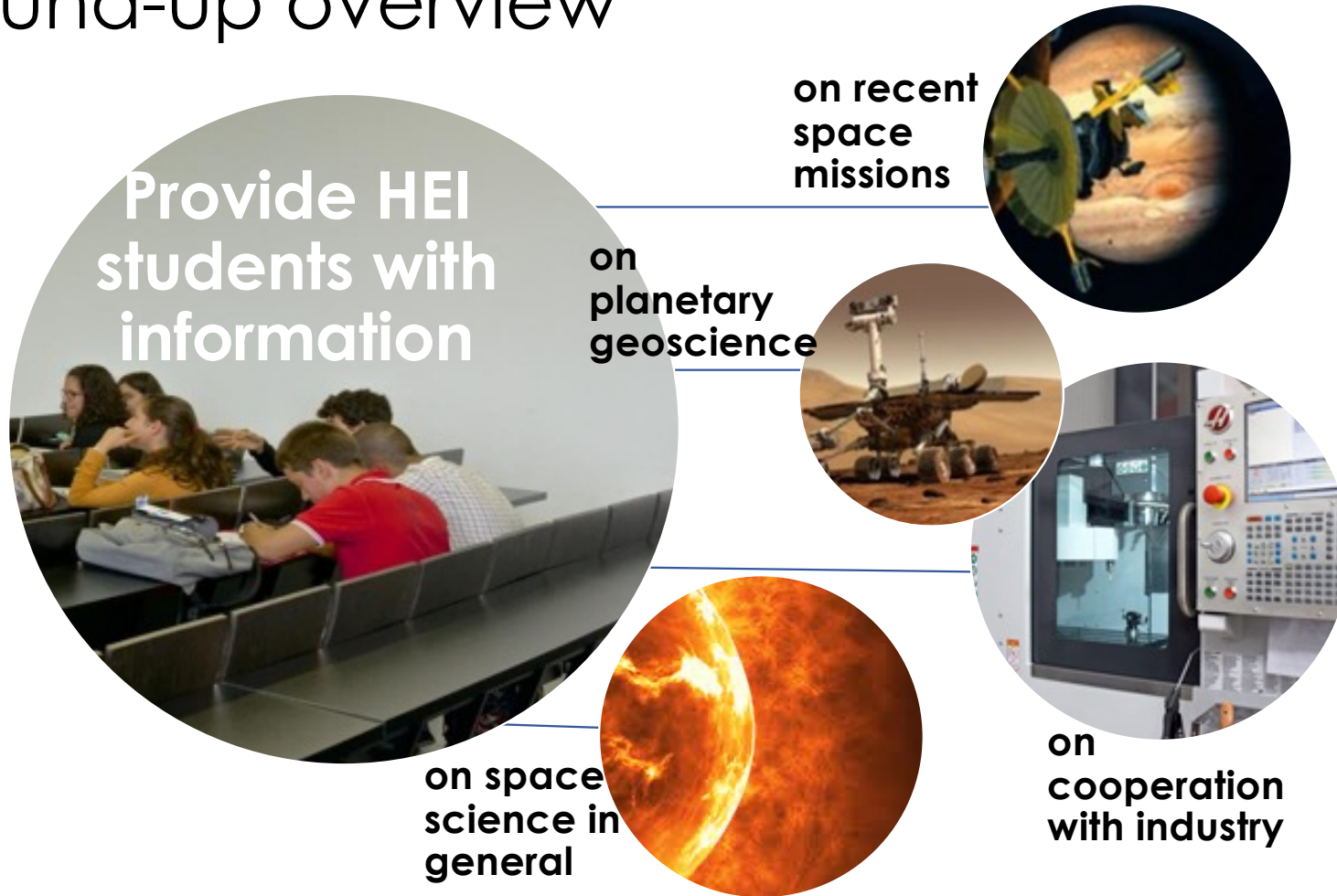
<https://geoplanet-sp.eu>



- **Teaching/Learning activity C3: “Sciences and Technologies for Space – a ground up overview”** : virtual workshop, Airmeet platform, 13-17 September 2021
- **Intellectual Output IO4: “Open educational resource on career prospects for students of astrophysics and planetary sciences”** : ongoing, report on September 2022
- **Transnational Partner Meeting**: virtual on Zoom, 25 October 2021



WS 'Sciences and Technologies for Space – a ground-up overview'



Martian Rovers: from Curiosity to Perseverance, Including Zhurong [View Schedule](#)

WORKSHOP "SCIENCES AND TECHNOLOGIES FOR SPACE - A GROUND UP OVERVIEW"

DAY 1 **SPACE MISSIONS**

First time that the descent in fully imaged by several cameras

Chats Q&A Polls Shared Screen

AT Adriano Tullio IRSPS - 2 hours ago

Terrific talk, Andrea: is there a link for...

https://www.cosmos.esa.int/documents/291575/1294311/ExoMars_LSS_User_Manual_V1_17Dec13.pdf/66af9d2d-cbef-3f5e-0656-09b6e01e1e18

LE Leo Einright Irish TV - an hour ago

Is there a list of the HiRISE images you are using for the DTMs?

an hour ago

(I use HiView regularly, but the Hi-RISE site is sometimes difficult to work. It would be "really" helpful to have a list of the Sigma-1 area images you are using 😊)

Andrea Pacifici PhD, IRSPS - an hour ago

Terrific talk, Andrea: is there a link for...

Thank you Leo!

<https://exploration.esa.int/web/mars/-/53456-exomars-2018-landing-site-selection-users-manual>

(I use HiView regularly, but the Hi-RISE... you can go there and download all the HiRISE stereo-pair footprints <https://rods.msl.mtu.edu/mars/indextools.aspx?displaypage=footprint> you can go there and download all the... search for Mars Reconnaissance Orbiter - HiRISE - derived data - Anaglyph image

<https://www.airmeet.com/e/48495850-ff8d-11eb-b718-31bbc3b6e1b2>

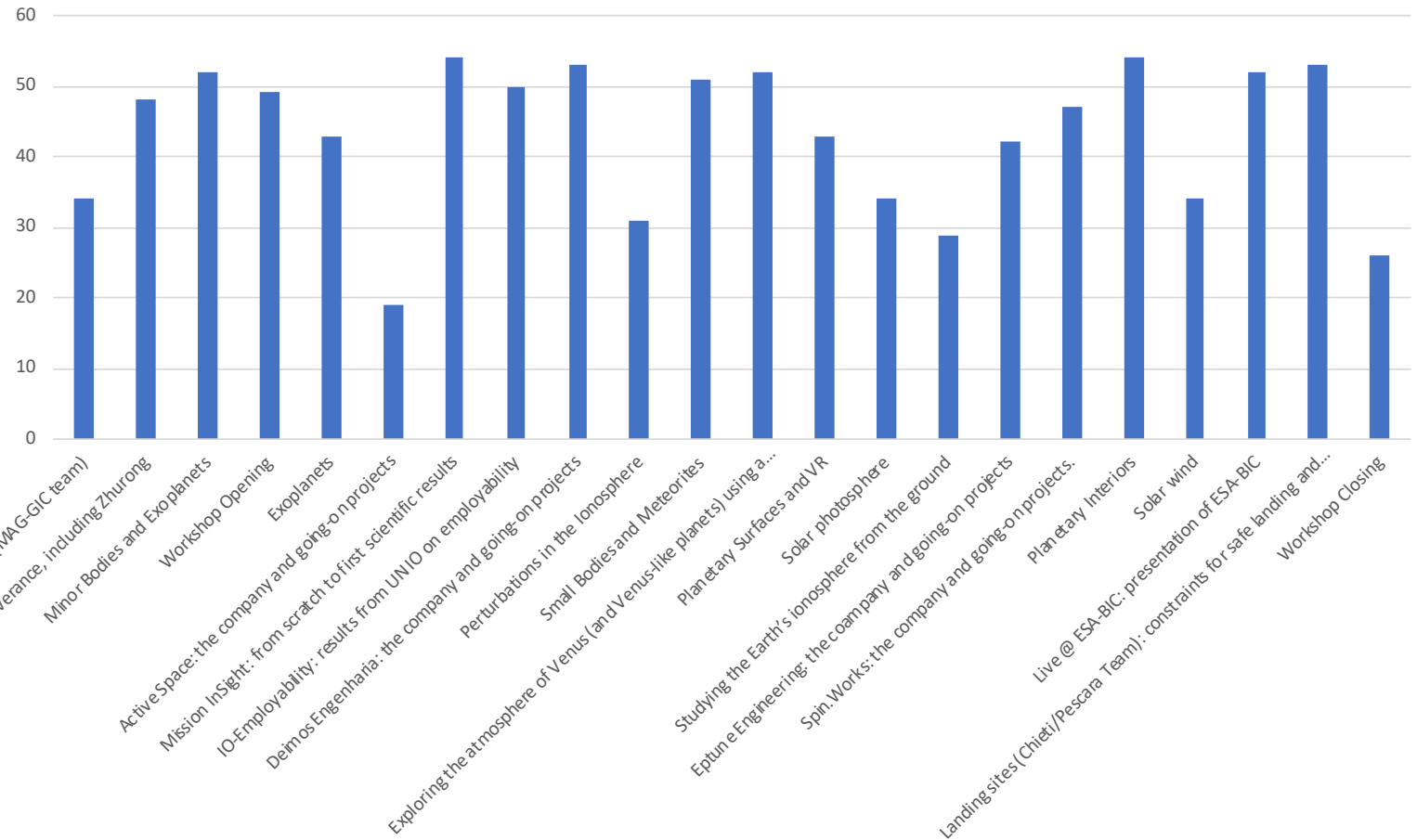
<https://youtu.be/UuHo9nLcOMU>

- Some numbers (using AIRMEET tools)

Registrations: 143

Attendance number per session:

Country	Registered per Country
Belgium	1
Brazil	1
France	34
India	1
Ireland	1
Italy	20
Portugal	80
Russian Federation	1
Spain	2
Switzerland	1
Turkey	1



IO4: WS Sci&Tech for Space

→ Resources on career prospects

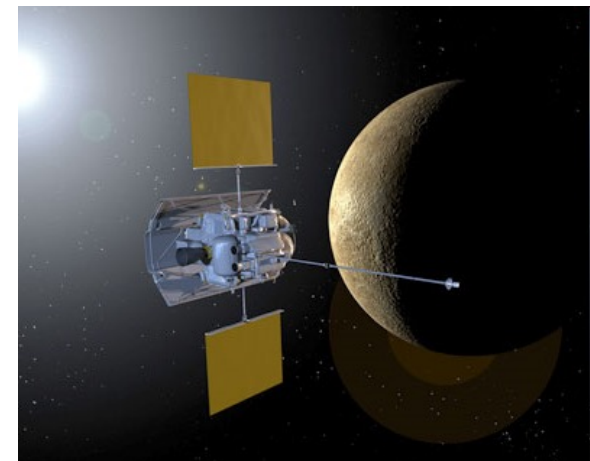
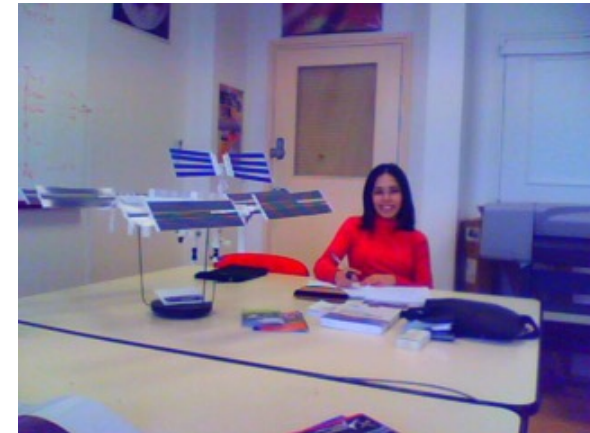
- Gathering material collected during this workshop (talks, slides, videos,...);
- Development of new material: video clips, graphics, simulations, articles, surveys;
- Add feedback, testimonies, experiences;
- Dedicated website with open educational resources in Space Sciences;
- To be accessed from a smartphone, a laptop or a desktop.

Past and present co-supervisions

Geomagnetism and Planetary Interiors (A. Pais, H. Amit, B. Langlais, ...)

- MSc internship of Joana Oliveira, in the framework of the MAIE: '*Modeling the Magnetic Field of Mercury*', 2011.
- Followed by PhD at LPGNantes: '*The Magnetic Field of Mercury as Measured by the MESSENGER spacecraft*', mars 2015.

MHD of planetary interiors, planetary magnetic field models, inversion problems

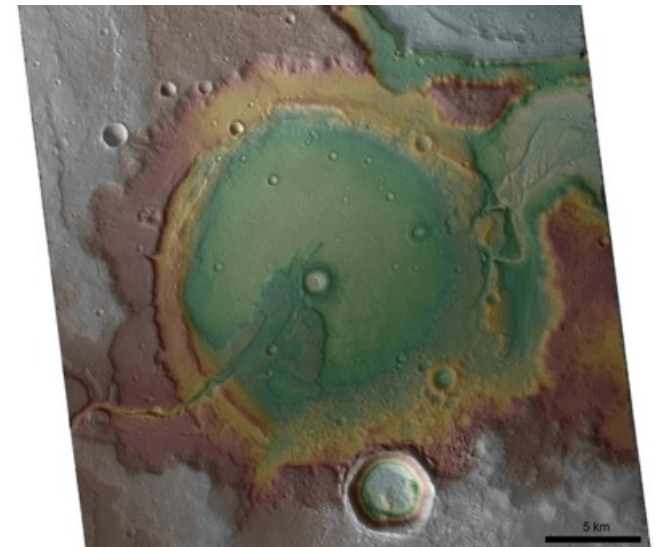


Past and present co-supervisions

Surface of Mars, using RS data (D. Vaz, L. Le Deit e G. di Achille, ...)

- David Silva, in the framework of the Geology PhD from DCT: *'The origins of Martian fan-shaped deposits: Insights on the paleoclimatic evolution and habitability potential of Mars'*, ongoing.

Image processing, espectroscopy and martian geology, sedimentology and geomorphology.

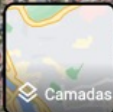


Coimbra

Magnetic Observatory

Geophysical and Astronomical Observatory

UC – pole I



Google

Pescara

Ud'A – pole Pescara

Google

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Coimbra

Magnetic
Observatory

Geophysical and
Astronomical
Observatory

UC – pole I



Google

Nantes

UN – pole science and
Technologies

