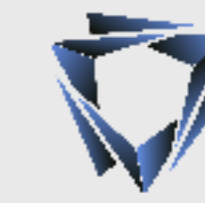


Co-funded by the
ERASMUS + Programme
of the European Union



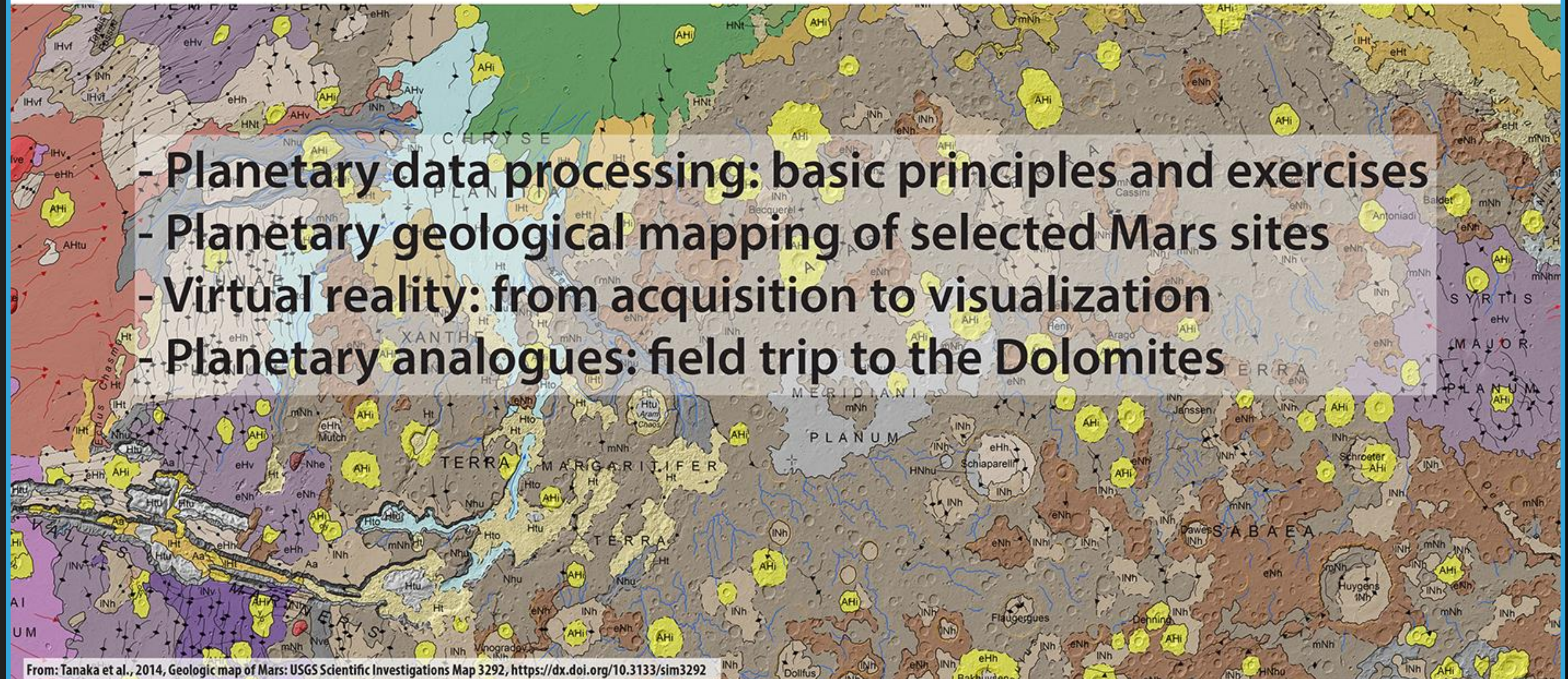
SCHOOL ON PLANETARY GEOLOGICAL MAPPING AND PLANETARY ANALOGUES





School on Planetary Geological Mapping and Field Analogues

26 September–8 October 2022, Pescara–Padova (Italy)



- Planetary data processing: basic principles and exercises
- Planetary geological mapping of selected Mars sites
- Virtual reality: from acquisition to visualization
- Planetary analogues: field trip to the Dolomites

From: Tanaka et al., 2014, Geologic map of Mars: USGS Scientific Investigations Map 3292, <https://dx.doi.org/10.3133/sim3292>



FIRST WEEK IN PESCARA

September 2022							< Today >
	Mon 26	Tue 27	Wed 28	Thu 29	Fri 30	Sat 1	Sun 2
all-day							Settimana del pinaeta terra
09:00	09:00 Introduction & Housekeeping	09:00 Processed data and GIS integration	09:00 Planetary Mapping and geological thinking	09:00 Geophysics of the icy satellites	09:00 Stratigraphic Relations	09:00 Realizing the geological section and the stratigraphic schemes	
	09:30 Presentation						09:30 Moving to the DOLOMITES
10:00	10:00 Data in planetary science		10:00 DEM		10:00 Realizing a geological cross section		
		10:30 Coffee break					
11:00	10:45 Coffee break	11:00 GIS Integration	10:45 Coffee break	10:45 Coffee break	10:45 Coffee break	10:45 Coffee break	
	11:15 ISIS		11:15 DEM	11:15 Geophysics of the icy satellites	11:15 Mapping	11:15 Realizing the geological section and the stratigraphic schemes	
12:00			12:15 Type of Mapping approaches				
13:00	13:00 Lunch break	13:00 Lunch break	13:00 Lunch break	13:00 Lunch break	13:00 Lunch break	13:00 Lunch break	
14:00	14:00 Data Processing (CTX)	14:00 Nasa Ames Stereo Pipeline	14:00 Spectral data	14:00 Mapping icy satellites	14:00 Mapping		
15:00							
16:00	15:45 Coffee break	15:45 Coffee break	15:45 Coffee break	15:45 Coffee break	15:45 Coffee break		
	16:15 Data Processing (CTX)	16:15 CTX DEM (HiRise spiegato ma glielo diamo noi)	16:15 QGIS & Mappy	16:15 Mapping icy satellites	16:15 Realizing the geological section and the stratigraphic schemes		
17:00							
18:00	18:00 Mapping Mars sedimentary deposits		18:00 Mapping Venus		18:00 Mapping Small Bodies		
19:00							

POTENTIAL FIELD TRIPS AND PRACTICAL ACTIVITIES

Processes to be potentially seen in the field	Field Analogue and Location	Practical activity	Seminars	Days
Alluvial plains, fluvial sedimentary structures and sequences, arid soils, gypsum nodules and veins mobilization	Arenaria di Val Gardena(Permina) (Blutterbach, Alto Adige)	Photogrammetric 3D reconstruction Stratigraphic logs and structural measurement in virtual environment	Dolomites evolution and formation	2,5
Sabkha environments	Bellerophon fm (Blutterbach or Passo Valles) Travenanzes fm		Sabkhas on Mars?	0,5
Paraglacial environment: debris-flows and rock glaciers.	Passo S. Pellegrino, (Veneto)	Remote Sensing geomorphological interpretation of paraglacial environments of San Pellegrino Pass and on Mars	Glacial, Periglacial and Paraglacial environments on Mars	1,5
Post glacial Deep Seated Gravitational Slope Deformations ?	Castellazzo-Valles	Remote Sensing interpretation of DSGSD on Earth and Mars	DSGSD on Earth and Mars	1
Volcanic processes ?	Middle Triassic Volcanism Canazei-Pordoi)			0,5

SECOND WEEK IN DOLOMITE

October 2022

Today

	Sun 2	Mon 3	Tue 4	Wed 5	Thu 6	Fri 7	Sat 8
09:00	Transfer to Dolomites	Geological Field Trip at Blutterbach gorge and photogrammetric acquisitions	Geo field trip on Sabkhas environments or diapirism structures In Dolomites (Bellerophon in Blutterbach or Valles or Travenanzes)	Stratigraphic log and measurement and 3D models on Mars and Blutterbach gorge	Geological field trip at San Pellegrino pass (Rock glacier and Debris Flow).	Field Trip on DSGSD (Valles Castellazzo?)	Volcanic sequences in the Dolomites
10:00							
11:00							
12:00							
13:00							
14:00				Lunch break			
15:00				Glacial and Paraglacial morphologies on Ma...			
16:00		Photogrammetric reconstruction	VR techniques and Environment	Geomorphological interpretation of paraglacial processes on S. Pellegrino pass	Geomorphological interpretation of paraglacial and glacial morphologies on Mars	Geological interpretation of DSGSD and landslides on Mars	
17:00	Welcome	Sabkhas on Mars and diapirism	Stratigraphic log and measurements in VR of the Blutterbach gorge		DSGSD on Earth and Mars		
18:00	Geology of the Dolomites						

MARS AND EARTH: A DIFFERENT FATE

October 7th, 2022

- ▶ Aim: engage high-school students
- ▶ Practical activities
- ▶ Lectures



Settimana del Pianeta Terra compie dieci anni!

Dal 2012, 1800 Geoeventi in 650 località sparse in tutta Italia.
Comunichiamo insieme cultura geologica e ambientale!