3rd WORKSHOP ON ADVANCED X-RAY CHARACTERIZATION TECHNOLOGIES IN EARTH SCIENCES

When?

🗓️ **22-24 October 2025**; Field trip on Etna 25 October (optional)

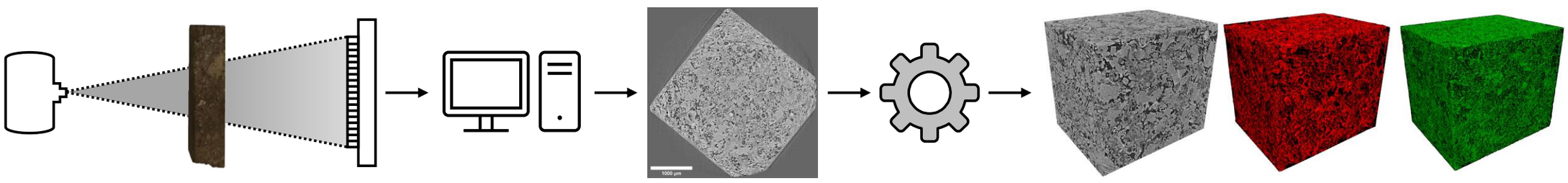
Where?

📍 **University of Catania**, Botanic Garden, Department of Biological Geological and Environmental Sciences - Via Etnea 397 Catania (Italy)

Key Dates & Fees

- ❑ **Registration opening:** 28 July 2025
- ❑ **Registration deadline:** 10 September 2025
- ❑ **Participation fee:** Full 50 €/ Reduced 30 € (includes social dinner & coffee breaks)

Workshop modality: In presence
Maximum partecipants: 50



Topics

The workshop will encompass theoretical (lectures) and practical sessions and will cover the following topics:

- ❑ **2D/3D/4D X-ray imaging techniques**: principles, applications and tutorials
- ❑ **Multidisciplinary applications in Geosciences**
- ❑ **Petrology and volcanology** applications
- ❑ **Building materials and Heritage Science** applications

more info and registration

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https://sites.google.com/view/xrayworkshop/home-page

Contents

Use of **X-ray computed microtomography (X-µCT)** techniques (synchrotron-based and advanced lab instruments), including static, time-lapse, and dynamic experiments. Participants will gain hands-on experience in **acquiring and processing X-µCT data**, including image analysis techniques, phase selection, and quantitative parameter extraction.

Programme

22 October	Introduction and General Applications
23 October	Petrology and Volcanology
24 October	Building Materials and Heritage Sciences
25 October	Fieldtrip at Mount Etna (optional)

Target Audience

BSc, MSc and **PhD** students, **post-doctoral**, and **senior researchers** interested in advanced 3D processing and analysis in Earth sciences.
Some seminars and laboratory practices will be specifically dedicated to **high school teachers**, aimed at providing tools and ideas for teaching based on advanced technologies.

Programme Committee

Cristina Caggiani (University of Catania, Italy); **Valeria Indelicato** (IUSS Pavia & University of Catania, Italy); **Marisa Giuffrida** (University of Catania, Italy); **Roberto Visalli** (University of Catania, Italy); **Giuliana Tromba** (Elettra, Italy); **Lidija Korat Bensa** (ZAG, Slovenia)

Organizers

Marko Kudrna Prašek
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