



PROVENANCE IN GEOSCIENCES: APPLICATIONS AND LIMITS



*Dottorato di Ricerca in:
Scienze della Terra e
dell'Ambiente*

A COURSE BY PROF. UDO ZIMMERMANN

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19-23 JUNE 2023

The course will introduce to the sampling techniques, the determination of composition and the interpretation of common challenges when researching provenance – for rocks or ceramics or soils.

The course is devoted to Ph.D. students, but undergraduate and postgraduate students are also welcome.

Main topics will be:

- Introduction to the 'correct' sampling method for a specific objective
- Brief introduction to geochemistry and isotope geochemistry
- Presentation of 'classic' provenance methods (e.g. whole-rock petrography + geochemistry + isotope geochemistry, Raman)
- Introduction to major isotope geochemistry methods (ICP-MS with laser ablation, SHRIMP I + II, TIMS)
- Introduction to state-of-the-art analytical techniques (e.g. QEMSCAN, MLA (mineral liberation analyser), ion microscopy)
- Critical review of detrital zircon isotope and chemical analyses and its consequences for 'old' data sets and the future
- Major application of provenance for geology, archeometry and environmental sciences

Dipartimento di Scienze Biologiche, Geologiche e Ambientali, Palazzo Ramondetta, Corso Italia, 57 – Catania - Day 1 Monday June 19 2023 h. 15-18 Aula C [link](#), Day 2 Tuesday June 20 h. 14-17 Aula C [link](#), Day 3 Friday June 23 Aula Microscopia h. 10-13 [link](#)

It is planned to carry out a short excursion on Wednesday 21 June 2023 h. 9-17 and a laboratory on Thursday 22 2023 (Aula Microscopia) h. 10-13. If you would like to participate, please, send an email to rosanna.maniscalco@unict.it