

Lecture Abstract:

## “Trace metals in speleothems: LA-ICP-MS vs SYNCHROTRON XRF techniques”

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- Laser Ablation Inductive Coupled Plasma-Mass Spectrometry (LA-ICP-MS) technique: sample preparation, analytical procedures, background removal, baseline drift, detection limits, mass interferences, spatial resolution, adjacent scans correlation.
- Synchrotron Radiation X-ray microfluorescence (SR- $\mu$ XRF) technique: Soft and Hard XRF, sample preparation, analytical procedures, data reduction, background removal, detection limits, spectral interferences, spatial resolution, map and scans correlation.
- The speleothem enrichment factor: host rock vs. speleothem composition.
- Incorporation of trace metals in speleothem carbonate: behavior of solute, colloidal and detrital elements.

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