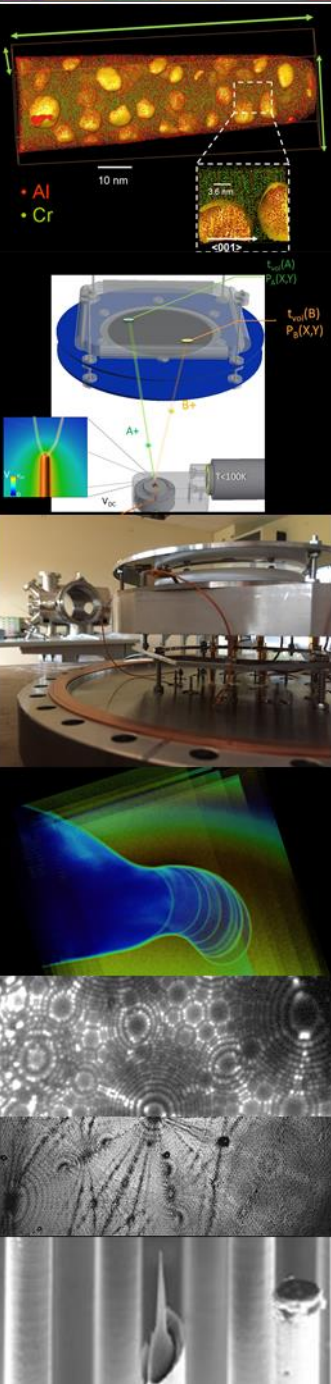




14th School on Atom Probe Tomography Rouen November 14-18, 2022



Scope

This school will provide a thorough background on the principles of the atom probe technique, from the theory of the field evaporation to data mining. Lectures will focus on the basics of APT with a special emphasis on up-to-date techniques (laser-pulsing, DLD detectors, FIB specimen preparation). Beside this lecture series, practicals are organized including specimen preparation, Field Ion Microscopy, APT analysis and data mining.

Registration

Deadline September 30th, 2022

The participation to the school is free of charge

The number of participants is limited to 20 people

Online registration: <https://sites.google.com/view/aptschool2022/home>



Venue

University of Rouen

Groupe de Physique des Matériaux (UMR CNRS 6634)

76801 Saint Etienne du Rouvray – France

Tel.: + 33 (0)2 32 95 50 21

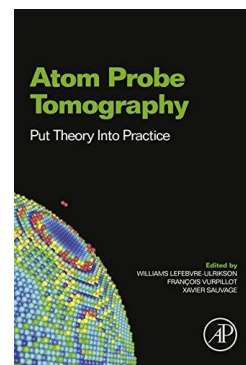
Invited Lectures

K. Grandfield (Mc Master Univ.)– APT and Biomaterials

D. Fougereuse (Curtin Univ.) – APT in Geosciences

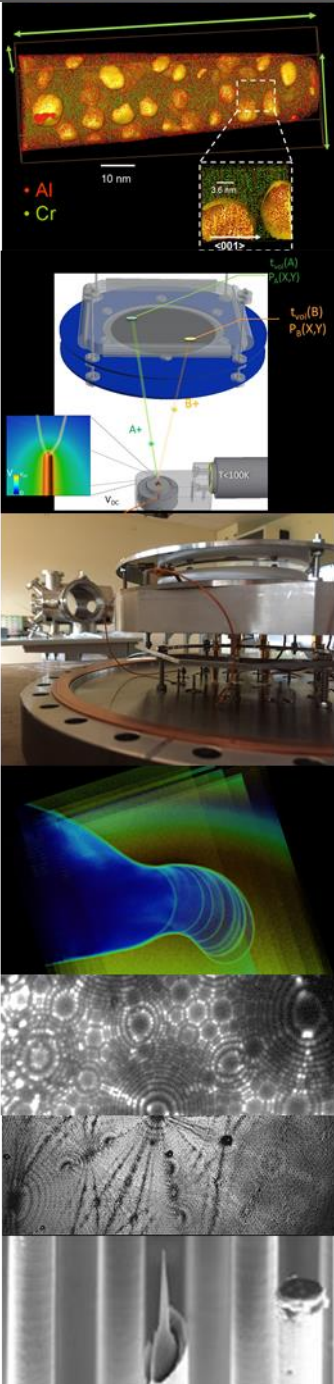
Contact

Lorenzo Rigutti (lorenzo.rigutti@univ-rouen.fr)





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Lecture Topics

- History and basic principles of Atom probe Tomography
- Application of APT in material science
- The theory of field ionization and of field evaporation
- 3D reconstruction and possible artefacts
- Time of flight spectrometry, mass spectrum, mass resolution
- Composition measurements and statistics
- Technology of the atom probe: UHV, cryogenic, HV, electronics
- Laser-matter interaction, laser assisted field evaporation
- Basic data processing: mass spectrometry, 3D reconstructions
- Advanced data mining: filtering, statistics, cluster identification, ...
- APT Specimen preparation using Focused Ion Beam
- Application of APT in physical metallurgy
- Application of APT for energy materials
- Application of APT for functional materials

Practicals

- APT specimen preparation
- Field ion microscopy and atom probe analysis
- Laser assisted atom probe analysis
- Basic and advanced data mining

