

Institute of Thermomechanics, Czech Academy of Sciences

invites you to a lecture within the lecture series **Institute of Thermomechanics Seminar**

Introduction to Atom Probe Tomography

given by

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The installation of an Atom Probe Tomography (APT) instrument of the newest generation at the Institute of Thermomechanics is taking place this year. This will open new opportunities for atomic-scale characterization of materials relevant to a wide range of applications. APT provides three-dimensional, near-atomic-resolution maps of chemical composition with unrivalled sensitivity, enabling direct insight into solute distributions, interfaces, clustering phenomena, and nanoscale phases.

In this seminar, the working principles of APT will be introduced, covering specimen preparation, field evaporation, time-of-flight mass spectrometry, and data reconstruction. Emphasis will be placed on the capabilities and limitations of the technique, and examples will include the study of precipitation processes and segregations to interfaces. The talk aims to provide a conceptual understanding of APT and inspire ongoing and future research activities. The planned utilization of APT in research topics covered by the FerrMion project will be briefly summarized.

**The lecture will be held on Tuesday, January 27th, 2026 at 10:00 a.m.
in the building of the Institute of Thermomechanics (Lecture Hall),
Dolejškova 5, 182 00 Prague 8**



Ferroic Multifunctionalities (FerrMion)
CZ.02.01.01/00/22_008/0004591



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