

## **X-ray Absorption Spectroscopy – capabilities and applications**

**Presenter:**

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**Date and time:**

Date: 28 May, 2026

Time: 14:00, CEST

**Location:**

KFKI Campus, Building 3, Lecture room (1<sup>st</sup> floor)

Address: 1121 Budapest, Konkoly-Thege Miklós út 29-33.

**Seminar link:**

in-person only

**Abstract:**

X-ray Absorption Spectroscopy (XAS) is a powerful, element-specific probe of local atomic and electronic structure widely used in materials science. This seminar introduces the technique, outlining synchrotron radiation principles, X-ray–matter interactions, and the key information accessible from XAS. Applications to both amorphous and crystalline systems will be illustrated. The LISA beamline at the European Synchrotron will be described, including its instrumentation, capabilities and access mode via the CERIC consortium. Finally, selected case studies on microelectronic materials, chemistry and cultural heritage will demonstrate the potential of XAS for addressing contemporary materials challenges.