

Archeologický ústav AV ČR, Praha, v. v. i., si Vás dovoluje pozvat na přednáškový blok:

## Archaeological precious metals analysis by Laser Ablation ICP-MS



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## **Abstract**

The laboratory IRAMAT in Orléans (France) was a pioneer in the application of Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) for the characterization of archaeological artefacts. Now, a wide range of ancient materials, among which precious metals, can be characterized using this technique. The size of the laser ablation spot, invisible with the naked eye, makes it acceptable for ancient artefacts that can not be damaged by mechanical cleaning or sampling. Moreover, this method allows to determine the concentrations of a wide range of major, minor and trace elements with low detection limits, providing information both about the main components of the alloy and of the impurities it contains, which may help us to distinguish between different stocks of metals having different origins and potentially different provenances.

In this conference will be presented the main features of the analysis of ancient precious metals by LA-ICP-MS at the IRAMAT laboratory. Examples taken from past studies will show the potentialities and limitations of the application of this method to artefacts of different natures.

Duration ~60 min.

**Guillaume Sarah** is researcher at the IRAMAT laboratory in France (CNRS, Université d'Orléans). He holds a PhD in Chemistry and is specialized in the archaeometric study of ancient non-ferrous metals. His main researches deal with the characterization of medieval coinages (mostly silver), ancient metallurgical processes by the means of mining and metallurgical field archaeology and experimental archaeology, and circulation of materials during the early Middle Ages.