

Announcement for a PhD position in Archaeometry Department Geosciences – University of Fribourg

Topic : Mineralogy and petrology of archaeological iron smithing slag.

Assistant contract at University

Commitment Rate : 75 % Duration : 3 + 2 years

Starting Date : 1st october 2019

Supervision : Prof. Vincent Serneels

Location : Department of Geosciences – University of Fribourg

<https://www3.unifr.ch/geo/en/research/archaeometry/>

Slag is the waste resulting from metallurgical activities. These are debris that are frequently found during archaeological excavations. Smithing slag results from the accumulation of various debris in the hearth during iron smithing operations. Their structure and composition provide essential information for understanding the work performed (nature of raw materials, fuel, additions, etc.). Different laboratory methods can be used to characterize these materials (optical microscopy, SEM, XRF, XRD).

Over the past 20 years, studies on smithing slag have increased in number. Descriptive work has become very numerous. On the other hand, there are still gaps in the large-scale synthesis and comparison work.

The PhD student will be able to familiarize himself with the different types of smithing slag thanks to the important collection available in Fribourg. He will have to carry out himself additional studies on unpublished ensembles and will be able to participate in the work in progress. He will have to produce a synthesis describing the variability of smithing slag from the earliest traces dating back to the Early Iron Age to 19th century waste. Emphasis will be placed on a petrological approach to forge slag and associated debris.

Requested background and skills

Master in Earth Sciences.

Strong background in mineralogy-petrology and good training in microscopy (optical / electronical) and geochemical analyses (XRF).

Strong interest for archaeology.

Desired skills:

Good knowledge in laboratory techniques (XRF, XRD, SEM, etc)

Basic linguistic knowledge in French / German / English

Deadline for application: 31.8.2019

Email address for application:

Vincent.serneels@unifr.ch

Requested documents

Curriculum Vitae

Motivation letter

Preferably : PDF of Master work