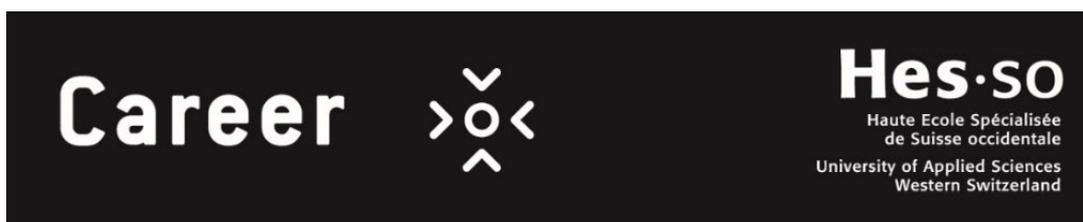


The Haute Ecole Arc Conservation-restoration (Neuchâtel, Switzerland) offers a position as

Research assistant 70%

From October 2022 to September 2026



MISSION

We are looking for a highly motivated research assistant to participate to a Horizon Europe Research and Innovation Action project, investigating metal bioremediation for the preservation of copper and iron artefacts at the interface of analytical chemistry, biotechnology and art conservation.

This project focuses on innovative and eco-friendly formulations for the stabilisation of altered copper and iron surfaces, in particular of archeological collections. The research team will exploit the process of biomineralisation provided by naturally occurring microorganisms to convert existing corrosion products into chemically stable biominerals.

MAIN ACHIEVEMENTS

The successful candidate will investigate the use of bio-based or natural gels amended with specific strains/microbial metabolites for the formation of biogenic minerals from copper and iron corrosion products. Experiments will be conducted to propose alternative green stabilization formulations that will be tested on mock-ups and selected case studies. Stabilisation methods will be applied on test systems (mock-ups and real sacrificial objects) and compared in terms of efficiency, aestheticism, and durability to benchmark and historical methods. The most appropriate methods for a specific degradation pattern will be validated on real case studies. A collaboration with an industrial partner is foreseen to design and realize carrier systems for tailored application.

SKILLS REQUIRED

- Hold a university Master's degree in materials science, conservation science or microbiology
- Autonomy, organizational and very good communication skills
- Experience in dealing with microorganisms and isolation of metabolites
- Knowledge on metals (identification, corrosion) and gel formulations
- Technical analytical skills (including FTIR/Raman microscopy, XRD, SEM-EDS)
- Some knowledge of French will be an advantage

WORKING PLACE

Haute Ecole Arc Conservation-Restauration Neuchâtel (Switzerland).

With research visits at the University of Bologna, Italy and Rijksmuseum, Amsterdam, Netherlands

DOCTORAL ENROLMENT

If of interest, the successful candidate could apply for enrollment in a doctoral program.

Application deadline: July 10, 2022

Short-list selection: July 11-12, 2022

Remote interview: July 13, 2022

Final decision and communication of approval: July 18, 2022

QUESTIONS ABOUT THE POSITION: Edith Joseph, edith.joseph@he-arc.ch, main supervisor.

For administrative issues related to the work place: Isabelle Rérat, isabelle.rerat@he-arc.ch, human resources delegate.

The application file should include a letter of interest accompanied with a short research proposal related to the research project (2 pages max.), a curriculum vitae (with publications and other academic works that the applicant would like to be considered in the evaluation), copies of Diplomas/academic transcripts and work certificates (English translations if they are in another language), and two reference contacts should be sent to Isabelle Rérat, isabelle.rerat@he-arc.ch.