HUN-REN Institute for Nuclear Research
(HUN-REN ATOMKI)

Laboratory for Heritage Science
(HSLab)

Access Policy

The Access Policy of HSLab follows the access policy of the EU H2020 IPERION HS project for Users coming for Trans-National Access through the project. When E-RIHS ERIC is established, this will be replaced by the access policy of E-RIHS. The main difference is that E-RIHS also envisages national users through the E-RIHS distributed research infrastructure. Access through IPERION HS or E-RIHS must also comply with the local regulations and restrictions. Access outside the EU schema is regulated by this document as well as by the general regulations and restrictions of HUN-REN ATOMKI.

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1. Introduction

Heritage science is a relatively new term for the complex research on our cultural and natural heritage, encompassing heritage management, analysis, conservation, interpretation, and documentation. In addition to archaeology, museology, art history, anthropology, and palaeontology, methods coming from the natural sciences, such as sensitive analytical procedures, play a major role in the discipline. The Laboratory for Heritage Science was founded to promote research in the field of cultural and natural heritage in collaboration with national and international partners.

DEFINITIONS
Users:

- Users can be individuals and group centres, industry or other private and public institutions involved in Heritage Science. They are actors in the conception or creation of new knowledge, products, processes, methods and systems or in project management.

- Teams of users can include researchers, technical staff and students undertaking research in their studies framework. According to its scientific strategy, HSLab encourages applications from users' teams with a strong interdisciplinary character.

Types of eligible objects:

- Research on cultural heritage, objects, monuments or sites belonging to the public domain.
- HSLab can accept projects involving private elements (collection, object, sample or monument), if:
    - the item is listed as an international, national or regional interest and is accessible and reusable to the public;
    - the object belongs to an individual but remains in a public institution and the access is requested together with the public institution.

Restriction:
HSLab does not provide authentication service or any activities which are directly related to the monetary value of the objects, it only deals with scientific inquiries.

Access modes:

- based on excellence
- a wide access to the needs of local museums
- a limited commercial access

Main principles:

- Travel and accommodation costs are borne by the users by default
- HSLab is not liable for the transportation and/or insurance costs of the objects

2. Access to the Ion Beam Analytical facility

Users coming through IPERION HS or E-RIHS are encouraged to contact the local team to ensure the appropriateness of the chosen techniques. Projects are submitted at the unique entry point of IPERION HS or E-RIHS. After positive evaluation, machine time is booked at the Tandetron accelerator of HUN-REN ATOMKI. The Peer Review Panel of the HUN-REN ATOMKI Accelerator Centre accepts the peer review decision of IPERION HS or E-RIHS; nevertheless, the beam time must be booked according to the regulations of the Accelerator Centre. That means, the local contact fills in the project proposal template with the relevant data and negotiate the time of the measurements between the User group, local team and the Tandetron facility.

Access outside the EU schema follows the access policy of the Accelerator Centre when the project is positively evaluated by the HSLab team.

3. Access to the devices which are not set-up at the Tandetron facility

The laboratory is equipped with the following major devices:

- Digital 3D microscope: The first step in the investigation of cultural heritage objects is optical imaging. Besides the image, the digital 3D microscope yields quantitative information about the structural features of the object not only on a horizontal but also on a vertical scale. This is useful, for example, for determining the depth of carvings or the height of reliefs.
- Micro-XRF equipment: It is a tool for sample characterization using small-spot micro-X-ray fluorescence. The measurement gives quantitative information about the composition and distribution of elements. The spectrometer is optimised for high-speed analysis of points, lines, and 2D area scans (element mapping) of the samples. It works both in vacuum and in air and has a large chamber.
- Scanning electron microscope: It scans a focused electron beam over a surface to create an image. The electrons in the beam interact with the sample, producing different signals that can be used to obtain information about the surface topography and composition. The device also operates in a low vacuum.
- Raman microscope: In the case of Raman spectroscopy, the vibration spectrum can be used to obtain information on the type, position, and orientation of the functional groups in molecules. The compounds can be identified by their characteristic Raman spectra.

Access to these devices is more flexible than the access to the Ion Beam Analytical beamlines. Smaller projects can be accommodated upon written request by the User group leader according to the availability of the team.

Major projects necessitate a written agreement between HUN-REN ATOMKI and the partner institution.

4. Use of services

a. Purpose of the research, ethical conduct and integrity

Users shall only use the services for professional activities related to Heritage Science investigations. Users must also comply with good Heritage Management practices.

Users shall not use the services for any purpose that is unlawful and not attempt to breach or circumvent any administrative or security controls within the facilities.

Users shall adhere to the standard codes of conduct and ethical behaviour in scientific research and to research integrity*.

b. Applicable legislation and regulations

Users are responsible for complying with any applicable national legislation and host institutions regulations, especially safety regulations.

Users shall immediately report any known or suspected security breach or misuse of the services or access credentials to the specified incident reporting locations.

Users shall also adhere to and not wilfully violate the terms of use and data policies determined by HUN-REN ATOMKI HSLab.

c. Other considerations

The users shall provide HUN-REN ATOMKI HSlab with all information known to them about the object of artefact that may be relevant for the safe conduct of the examination or relevant to the preparation of the examination.

In some cases, the users may be asked to authorize preparatory procedures essential to carry out the requested analysis (i.e. capture of high-resolution images of the artefact).

5. User duties

a. Users and user groups

There is no formal difference between single users and groups. The ‘user-group’, is a team of one or more researchers (users) led by a ‘user group leader’. Users can thus be individuals or teams from academia, business, industry and public services. They are engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of projects.

Teams can include researchers, doctoral candidates, technical staff and students participating in research in the framework of their studies.

b. Acknowledgement and co-authorship

Users shall acknowledge the contribution of HUN-REN ATOMKI HSLab in any output (i.e. publication, patent, data, etc.) deriving from research conducted within its realms.

Users agree to reference the source of the data in every communication where they make use of, or refer to the data resource.

In accordance with good scientific practice, the users should follow the principle of co-creation of knowledge giving co-authorship to those working at the HUN-REN ATOMKI facilities having made genuine scientific or technical contributions to their work. Where the resource stipulates a specific form for this reference or acknowledgement with the facility, this form shall be used by the users.

c. Open data

HUN-REN ATOMKI HSLab promotes FAIR principles and Open data practices. Hence users are expected to make their publications available through open access repositories as much as possible. *(Also see the Data Management Plan of the facility.)*

d. Intellectual property

Users shall respect intellectual property and confidentiality agreements in accordance with the facility rules. The ownership and intellectual property rights to any data, or data related tools, databases, software, prototypes, new tools or methodologies or any other products that are generated in relation to the access shall be established in accordance with the applicable legislation and the provider regulation with due consideration to the EU Code of practice for universities and other public research organisations on the management of the intellectual property in knowledge transfer activities.

Those who have jointly generated work and results shall have joint ownership and they shall agree separately upon the conditions of the joint ownership. “Results” means any (tangible or intangible) output of the access such as data, knowledge or information whatever its form or nature, whether it can be protected or not.

Those who have generated Background data or Side-ground data shall own all rights to the Background and Side-ground properly. “Background” means data, databases, data products and data related tools or any other intellectual property rights generated before the access activities at the HUN-REN HSLab facility started. “Sideground” means data, databases, data products and data related tools or any other data subject to intellectual property rights generated at the same time the access activities take place but which are not generated as part of the access activities.

e. Security and insurances

Users use the services at their own risk.

Users shall be responsible for their own insurances. The users are liable to provide insurance for the objects or artefacts and personnel over the period of the access.

By submitting a proposal, users declare that they were allowed to work on the objects or artefacts involved in the User project.

6. Access limitations and force majeure

a. Availability and cancellation policy

HUN-REN ATOMKI HSLab does not guarantee that the services will be available at the agreed time and place or that tools will be working properly.

Users agree that HUN-REN ATOMKI is entitled to regulate, suspend or terminate the access without prior notice and without compensation, within its domain of authority, and users shall comply with its instructions.

b. Limitations and force majeure

Access to HUN-REN ATOMKI HSLab facilities may be limited, amongst others, by the following potential issues:
− national security and defence;
− privacy and confidentiality;
− commercial sensitivity and related intellectual property rights;
− authentication requests and related value-assessment of objects;
− ethical considerations in accordance with applicable laws and regulations.

"Force majeure" means any situation or event that:
− prevents either party from fulfilling their obligations;
− was unforeseeable, exceptional situation and beyond the parties' control;
− was not due to error or negligence on their part (or on the part of third parties involved in the action); and,
− proves to be inevitable in spite of exercising all due diligence.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible. The party prevented by force majeure from fulfilling its obligations under this document cannot be considered in breach of them.

For any further enquiries, please contact hslab@atomki.hu

**The European code of conduct for research integrity drafted by the European Science Foundation (ESF) and the European Federation of National Academies of Sciences and Humanities (ALLEA) sets out eight principles that Researchers need to abide to: honesty in communication, reliability in performing research, objectivity, impartiality and independence, openness and accessibility, duty of care, fairness in providing references and giving credit, and responsibility for the scientists and researchers of the future.*
http://www.allea.org/Content/ALLEA/Themes/Scientific%20Integrity/Code_Conduct_Research_Integrity.pdf