

Klaipėda University strategic research directions
 "Societies and Cultures on the Baltic Coasts"
 postdoctoral fellowship topic application (2024-2026)

Title of the traineeship topic	Continuity and change: a comparative analysis of the elemental composition and technologies of copper alloys from the Baltic region in the 1st to 13th centuries
Traineeship field(s) of study, supervising unit, start date, duration	Humanities; Archaeology Institute of Baltic Region History and Archaeology 1 October 2024 – 30 September 2026
Aim, objectives and results of the research (up to 1000 characters)	<p>In the 1st-13th centuries, jewellery and various accessories made of copper alloys were prevalent in Lithuania as in the Baltic region. However, the raw materials needed for copper alloys production are not available in the area around the Baltic Sea, and the composition of the alloys and its changes are unclear, as is the development of the technology of production of artefacts. The aim of the research would therefore be to identify chronological differences in the elemental composition and technology of copper alloys in the Baltic region on the basis of X-ray fluorescence spectrometric data, and to carry out comparative analysis.</p> <p>Subject-matter: personal jewellery and accessories produced in varying copper-alloys. Territory: Lithuania, northeastern Poland, Latvia and Estonia. Chronology: the 1st-13th centuries AD. Objectives:</p> <ol style="list-style-type: none"> 1) Investigate dynamics of continuity and changes for copper alloys compositions in eastern Baltic region, and around the Baltic Sea. 2) Analyse comparatively the compositions of copper alloys in eastern Baltic region and around the Baltic Sea 3) Analyse comparatively of artefacts production technologies of copper alloys in eastern Baltic region 4) Integration of the new analyses into open access database: http://lydiniai.lt/. Link this database to other existing open access databases in Europe. <p>Novelty of the study: the results of the change in the elemental composition of copper alloys, the evolution of technologies and crafts will be analysed within the framework of the globalisation and centre-periphery paradigms.</p> <p>Results: The results of eastern Baltic Sea studies and their comparison in a trans-regional context will lead to the development of a European project for the Europe Research Council (ERC)</p>
Relevance of the topic to the objectives and priorities of the strategic scientific thrust (up to 500 characters)	The research and comparative analysis will allow to assess the rhythm of change in the production of copper alloys used in the manufacture of artefacts at local, regional and inter-regional level in the Baltic Sea Region, and to integrate the results into the European context. Therefore the theme aligns with the strategic research direction of the KU: "Societies and Cultures on the Baltic Coast". The data will allow to describe the changing level of crafts and society over time. The theme proposed for the traineeship also aligns with the BRIAI research direction "Technology in prehistory and proto-history".

<p>Planned intermediate and final outputs (scientific outputs: publications, presentations, etc.)</p>	<p>30 September 2024 - 30 September 2025 (intermediate results): More than 1000 artefacts will be analysed, and these results will be added to the open access database "Archaeometric database of copper alloy finds from the 1st to 14th centuries" curated by BRIAI. Available at: http://lydiniai.lt/ Preparation and submission of the article (personal or co-authored) for publication in a foreign journal, to be referenced in Scopus and Web of Science databases. Participate in the European Archaeological Association (EAA) conference in Athens in 2025. To organize a separate session on spectrometric research.</p> <p>October 2025 - 30 September 2026 2025 m. Organization of an international conference at KU BRIAI. Prepare and submit 2 articles (personal or co-authored) for publication in foreign journals referenced in Scopus and Web of Science databases. Together with partners, prepare a KU BRIAI-led project for the European Research Council (ERC). Organize presentations aimed at the general public, and possibly organize an online group for researchers interested in spectrometric research.</p>
<p>Other relevant information about the traineeship (intellectual property rights, necessary infrastructure, resources, social partners, etc.) (up to 500 characters)</p>	<p>XRF analyses will be undertaken with the cooperation of archaeologist and museums initially in Lithuania, northeastern Poland, Latvia and Estonia. Permissions from museums and archaeologist will be sought for accomplishing XRF analyses for publication both in the existing open access database and in articles. The successful implementation of the traineeship BRIAI has the necessary infrastructure (laboratory) a portable X-ray fluorescence (XRF) spectrometer, suitable for research standards and other necessary equipment for the successful implementation of the traineeship.</p>
<p>Involvement of the trainee in the activities of the unit (individual or teamwork, coaching/mentoring opportunities, etc.) (up to 500 characters)</p>	<p>The traineeship is expected to complement the BRIAI research group "Technology in prehistory and proto-history".</p>
<p>Trainee competence requirements (up to 500 characters)</p>	<p>Doctorate in Humanities in History and Archaeology (H005) or its international equivalent. Experience (scientific publications) in the specified field of the traineeship is an advantage.</p>
<p>Intended supervisor and/or advisor</p>	<p>Dr. doc. Audronė Bliujienė, BRIAI Senior Researcher Fellow.</p>