Title of the doctorate theme	**EVALUATING HISTORICAL SUSTAINABILITY TRENDS AND FUTURE PATHWAYS IN SOCIO-ECOLOGICAL COASTAL SYSTEMS**
Brief description of the topic	The proposed topic is focused on improving the knowledge basis for a more sustainable and resilient future of coastal ecosystems. The main research questions comprise: 1. What have been the key drivers and phases of sustainability in the selected coastal systems? 2. How can socio-ecological modelling and complexity science improve the understanding of interactions between environmental, social, and economic factors for the selected area? What are the barriers and enablers for achieving coastal sustainability in Europe, and how can management strategies address them? In terms of methodology the historical data analysis will be followed by the application of Complex Adaptive Systems (CAS) and other Casual Loop Diagram (CLD) network analysis approaches to examine feedback loops and interactions among ecological, social, and economic components. This will lead to the identification of potential management measures to enhance coastal sustainability and allow the future scenario analysis through the interventions and simulation of constructed SES of alternative pathways under different policy, climate, and economic conditions.
Requirements for a candidate	Basic background (MSc) in environmental management or ecology along with data analysis skills while the experience with R language or PYTHON will count as an additional asset.
Existing research infrastructure and support	The topic will build up the existing experience within and will follow the HORIZON EUROPE MarineSABRES project focused on the creation of digital quantified Socia-Ecological Systems (SES) model allowing interventions and scenario development for European Island systems and will be supported by this and future project relevant to SES analysis and modelling.
How the topic advances the research capacity of the Klaipeda University	This research is a novel field for the Klaipeda University and will contribute to the understanding of coastal sustainability in Europe, integrating historical perspectives with future-oriented modelling to support evidence-based decision-making and sustainable coastal management strategies.
Potential scientific supervisor	Dr. Artūras Razinkovas-Baziukas https://scholar.google.com/citations?user=JuGw7al8dmsC&hl=en
Potential scientific advisor	Alice Newton https://orcid.org/0000-0001-9286-5914 Mike Elliott https://www.elsevier.com/books-and-journals/book-series/mike-elliott