



**International 7th Baltic Earth Winter School
for Young Scientists on
“Earth System Science for the Baltic Sea Region”**
24 - 28 March 2025, Klaipeda, Lithuania

co-organized by

The Marine Research Institute of Klaipeda University,
The International Baltic Earth Secretariat under the umbrella of Baltic Earth (www.baltic.earth),
and the International green energy company Ignitis Renewables, which is developing the first offshore
wind farm in the Baltic States, “Curonian Nord.”



The 7th international Baltic Earth Winter School on ‘Earth System Science for the Baltic Sea Region’ has brought together doctoral students, early-career researchers and scientists.

The Baltic Earth Winter School focuses on all compartments of the Earth system such as the atmosphere, ocean, sea ice, land surface, and terrestrial and marine ecosystems. The holistic view of the Earth system will include the anthroposphere, considering human impacts on climate and environment. Many lecturers with different scientific backgrounds from all over the Baltic Sea and EU seas regions will introduce the PhD students and early career scientists into their research topics in an easily understandable format. Exercises, debates on hot topics in Earth system science and knowledge gaps, and a podium discussion will complement lectures on observations, experiments, and numerical modelling.

Course period: 4.5 full days in total, 24 – 28 March 2025,

Start: Monday 10:00; End: Friday 13:00

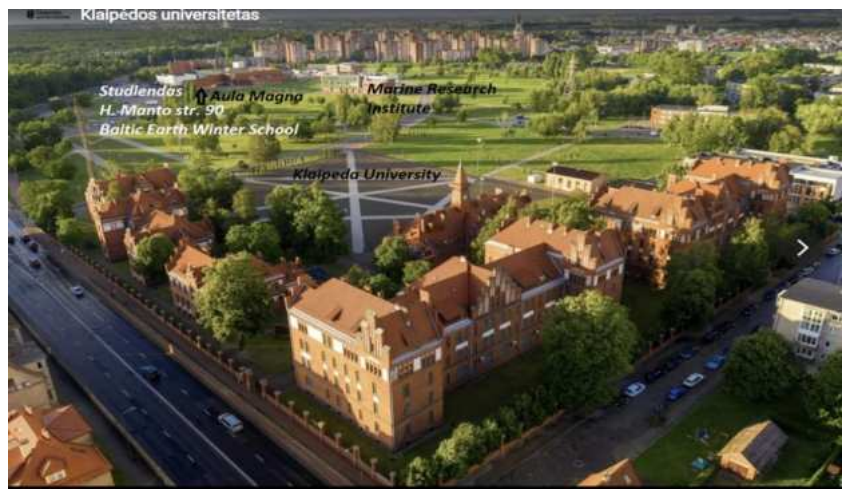
Estimated Number of Participants: ~60 persons.

Certification:

Participants will receive a certificate equivalent to 3 credits (80 hours).

Course Location:

Klaipeda University, “Studlendas”, Aula Magna, H. Manto str. 90, Klaipeda, Lithuania



(Photo: KU, Klaipeda University campus)

Accommodation:

Klaipeda is a seaport city with many available hotels and apartments. March is not a peak tourist season, so accommodation prices should be relatively low.

The nearest airport is Palanga (24 km away). If you are traveling via Vilnius or Riga airports, both are approximately 300 km from Klaipeda (around 4 hours by bus or train). A bus from the airport to Klaipeda costs about 30 euros.

For example, you can use the Ollex airport minibus service: <https://www.ollex.lt>

If you have any questions, don't hesitate to get in touch with the local organizers - we are happy to help!

Lecturers:

- ✚ **Inga Dailidienė**, Klaipeda University (KU), Marine Research Institute (MRI), Lithuania
- ✚ **Markus Meier**, The Leibniz Institute for Baltic Sea Research, Warnemünde IOW, Germany
- ✚ **Karol Kulinski**, Institute of Oceanology IO-PAN, Sopot, Poland
- ✚ **Kevin Parnell**, Tallinn University of Technology, Laboratory of Wave Engineering: Department of Cybernetics, Tallinn, Estonia
- ✚ **Clara Lazaro**, University of Porto, Department of Geosciences, Environment, and Spatial Planning (DGAOT) at the Faculty of Sciences, Portugal
- ✚ **Isabel Iglesias**, CIIMAR-Interdisciplinary Centre of Marine and Environmental Research of the University of Porto, Portugal
- ✚ **Anders Omstedt**, Marine Sciences, University of Gothenburg, Sweden
- ✚ **Albertas Bitinas**, Nature Research Center, Vilnius, Lithuania
- ✚ **Vita Gardauskė**, PhD student of KU MRI; State Service for Protected Areas under the Ministry of Environment, Lithuania
- ✚ **Arūnas Balčiūnas**, Klaipeda University, Marine Research Institute, Lithuania
- ✚ **Eglė Baltranaitė**, Mykolas Romeris University, Environment Management Laboratory, Lithuania
- ✚ **Saulius Karalius**, Lithuanian Maritime Museum, Lithuania
- ✚ **Nerijus Nika**, Klaipeda University, Marine Research Institute, Fisheries and Aquaculture Laboratory Lithuania

Program:

Day	Mon 24/03	Tue 25/03	Wed 26/03	Thu 27/03	Fri 28/03
Start of registration 09:30			Study tour-excursion / practice (Curonian Spit, Curonian Lagoon, Juodkrante, Nida) 09:30 - 17:00 9:30 bus departs (location: Aula Magna)		
10:00 - 10:45	Welcome	Kevin Parnell Lecture 1: What causes coastal erosion? Exploring coastal geomorphology by addressing an apparently simple question (2x45)	Nerijus Nika - KU Marine Research Institute Fisheries and Aquaculture Laboratory	Isabele Iglesias Lecture 1: Numerical Models and Visualization Tools: Practical Applications for the Atlantic and Baltic Regions (2x45)	Vita Gardauské The future of Baltic Sea protection (1x45)
Break 10:45-11:00					
11:00 - 11:45	Inga Dailidienė Climate Forming Processes and Indicators: Climate and Global changes (1x45)	Lecture 2	Arūnas Balčiūnas - Field Practice: Methodology for marine litter assessment on a sandy beach Saulius Karalius - LT Maritime Museum.	Lecture 2	Discussion Knowledge gaps and Summary
Lunch break 11:45 - 13:00					
13:00 - 13:45	Markus Meier Lecture 1: Climate change in the Baltic Sea region. Statistical methods application examples in climate change research (2x45)	Karol Kulinski Lecture 1: Biogeochemistry of the Baltic Sea (2x45)	Curonian Spit National Park Administration (Juodkrantė)	Clara Lazaro Lecture 1: Satellite Altimetry: A Journey Through Time and Its Impact on Earth Science Applications (2x45)	       
Break 13:45-14:00					
14:00 - 14:45	Lecture 2	Lecture 2	Albertas Bitinas - Geomorphology and history of Curonian Spit	Lecture 2	
Break 14:45-15:00					
15:00 - 15:45	Short presentation of young scientists (research topics /aims/results/interest areas) (~3 min.) Moderator Eglė Baltranaité	Anders Omstedt Lecture 1: A Philosophical View of the Ocean and Humanity: an Antidote to Tomorrow's Fragmental World (online, 2x45)		Clara Lazaro Lecture 3: Satellite Altimetry: A Journey Through Time and Its Impact on Earth Science Applications (2x45)	
Break 15:45-16:00					
16:00 - 16:45	Short presentation of young scientists	Lecture 2		Lecture 4	
16:45 - 17:30	Short presentation of young scientists	Students' group work and exercises Moderator Vita Gardauské		Students' group work and exercises Moderator Vita Gardauské	
Break 17:30-17:45					
17:45-18:30	Icebreaker Introduction to culture: Klaipeda University folk dance collective "Vytime" and band	Students' group work and exercises Moderator Vita Gardauské		Students' group work and exercises Moderator Vita Gardauské	

All participants will be allowed to present their research in the form of short presentation-talks and to open up for feedback.

Organization Committee:

Prof. Dr. Inga Dailidienė, Marine Research Institute (MRI), Klaipeda University, inga.dailidienne@ku.lt
Prof. Dr. Markus Meier, Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Rostock, markus.meier@io-warnemuende.de
Baltic Earth Secretariat (IBES) and Science Steering Group (BESSG)
<https://www.baltic.earth/organisation/bessg.html>

Local Organizing Committee:

Inga Dailidienė, Marine Research Institute (MRI), Klaipeda University, inga.dailidienne@ku.lt
Eglė Navickienė, Marine Research Institute (MRI), Klaipeda University, Klaipeda, Eglė.navickienė@ku.lt



Presentation of young scientists:

F Topic for the short presentation (3 min)	Name and surname of the presenter
1 Long-term changes in water quality and its consequences on fisheries, tourism, and nature protection	Giulia Bellon
2 Study of the effect of long-range transport on the chemical composition and optical properties of aerosol particles	Agnė Minderytė
3 Development shifts on the emerging Järve coast (Estonia) in Late Holocene	Katre Luik
4 Satellite-based ship detection in the Baltic region	Jonas Gintauskas
5 Weather anomalies in the Eastern Baltic and their links to atmospheric circulation patterns	Vaiga Vyšniauskienė
6 Applying seabird biology in coastal environment research: Great Cormorant as Baltic oceanographer	Paolo Salvador
7 Advancing meteotsunami prediction: testing high-resolution modeling in harbor environments	Laura Nesteckytė
8 Compound climate events in the eastern part of the Baltic Sea region	Laurynas Klimavičius
9 Effects of climate change on northern Baltic Sea plankton and herring communities and their trophic chain	Heta Rousi
10 Water flow and nutrient loads to surface water bodies of Lithuania and Hungary: Improving Hydrologic simulations of watershed through soil data integration	Péter Braun
11 Sustainability and Integrity of Transboundary Transitional Waters: a Holistic and Socioecological perspective	Aistė Jurkienė
12 OPTIMIZATION OF THE USE OF NATURAL TOURISM RESOURCES IN WESTERN LITHUANIA USING GIS	Egidijus Jurkus
13 Trends in the transformation of vegetation cover on the Kinburn Peninsula occurring as a result of active anthropogenic impact (based on analysis of satellite data)	Yuliia Shevchuk
14 PhD research plans on "Redox cycling in groundwater within the Earth's Critical Zone"	Pamela Abreldaal
15 Restoring in a Warming World: The Impact of Climate Change and Restoration on Fish Community	Xiaohao Shi
16 Social-ecological impacts and mitigation measures in a Baltic Sea coastal lagoon	Giulia Bellon
17 Effectiveness of open-source Digital Elevation Models (DEMs) for Representing River Profiles	Chala Hailu Sime
18 Variability of Marine Heatwaves' Characteristics in the Baltic Sea Over the Last 42 Years	Behzad Bashiri
19 Climate change and subarctic food webs: changes in biomass and phenology	Betty Marjamäki
20 Comparative analysis of morphodynamic trends along non-tidal spits (on examples from the Baltic, Black and Azov Seas)	Oksana Shvets
21 Environmentally friendly solutions for microplastic removal from water	Burbulytė
22 PFAS and Phthalates Extraction from Sediment: A Comprehensive Path from Method Design to Research Implementation	Laurie Kriegel
23 Legal and Environmental Analysis of Organic Pollution in River Systems: A Case Study Approach	Elena Hatton
24 Strategies for Microplastic Removal: Photocatalytic Degradation with Sustainable Nanomaterials	Sonata Pleskytė
25 Coastal dune morphostratigraphy: reconstructing development and driving factors	Pranciškus Brazdžiūnas
26 Compound Flood Risk Assessment of the Danė River in Klaipėda City	Erika Vasiliauskienė
27 Wetlands – A Lesson in Balance and Resilience	Kristina Jarmalavičienė
28 Measuring and modeling of coastal change in the era of climate change	Tii-Linda Purge
29 Finding water balance in river basins	Giedrius Motiejūnas
30 Social-Ecological Modelling of Marine Litter in the Baltic Sea	Milena Thiel
31 Assessing the Influence of Climate and Land Use Change Impact on Runoff Patterns in River Basins Using SWAT & CMIP6	Junaid Ali
32 Long term monthly evolution of a coupled temperature and salinity stratification of the Baltic Sea	Venkateswara Varma Gudimetla







