8th International Summer School on

"Climate of the Baltic Sea Region"

22 – 29 August 2022

co-organized by
Leibniz Institute for Baltic Sea Research Warnemünde (IOW), University of Rostock and
International Baltic Earth Secretariat at Helmholtz-Zentrum Hereon
under the umbrella of Baltic Earth (baltic.earth)

Draft Agenda

Day	Mon 23/8	Tue 24/8	Wed 25/8	Thu 26/8	Fri 27/8	Sat 28/8	Sun 29/8	Mon 30/8
General topic	Fundamental processes of the climate system; Student presentations	Climate variability; statistical methods	Regional climate variability and physical oceanography of the Baltic Sea	Physical oceanography of the Baltic Sea and carbon cycle	Eutrophication, hypoxia and projections	Ocean dynamics; science communication	Students' presentations	Travel from Askö
Speaker/title Morning session 09:00-10:30 (2 x 45 min)	Travel to Askö and logistic informations	Markus Meier: Climate modeling – the global and regional perspective	Markus Meier: Large-scale atmospheric and oceanic circulations and their impacts on the Baltic Sea region	Markus Meier: Physical oceanography of the Baltic Sea and other regional seas, part III	Markus Meier: Eutrophication and hypoxia	Inga Koszalka: Ocean dynamics I	Examination (45 minutes)	
Break 10:30-11:00								
11:00-12:30 (2 x 45 min)	Markus Meier and Lev Naumov: Course introduction and jupyter notebooks	Sebastian Wagner: Paleoclimate variability	Markus Meier: Physical oceanography of the Baltic Sea and other regional seas, part I	Markus Meier: Physical oceanography of the Baltic Sea and other regional seas, part IV	Markus Meier: History of the Baltic Sea and past changes	Inga Koszalka: Ocean Dyamics II	Markus Meier: How to write a good proposal	
Lunch break 12:30-14:00								
Speaker/title Afternoon session: 14:00-15:30 (2 x 45 min)	Short student presentations of previous thesis work (3 min, each)	Sebastian Wagner: Introduction into statistical methods of time series	Lev Naumov: Exercises on the analysis of the variability of the maximum annual sea-ice extent in the Baltic Sea (trend, correlation to the atmospheric circulation, etc.)	Leonie Barghorn: Exercises on the analysis of the variability of Major Baltic Inflows	Leonie Barghorn: Wavelet analysis	Exercises Inga Koszalka: Small-scale ocean dynamics	Students' group presentations	
Break 15:30-16:00								

16:00-17:30 (2 x 45 min)	Markus Meier: Fundamental processes of the climate system	Sebastian Wagner: Exercises on time series analysis using statistical methods, rolling dices	Markus Meier: Physical oceanography of the Baltic Sea and other regional seas, part II	Markus Meier: Carbon and biogeochemical cycles in the Baltic Sea	Markus Meier: Future projections and their uncertainties	Marcus Reckermann and Markus Reckermann: Science communication	Students' group presentations; résumé of the school	
Dinner 17:30-19:30								
19:30-21:00	Social activity (Ice breaker)	Students group work	Students group work	Marcus Reckermann: Biological oceanography and marine organisms	Students group work	Repetition and preparation for the exam	Social activity (Barbeque)	

Lectures	Hours	Contents
Prof. Markus Meier	28	Physical oceanography and meteorology, climate science
Dr. Marcus Reckermann	4	Biological oceanography and marine organisms
Dr. Sebastian Wagner	4	Paleoclimate variability and statistical methods
Dr. Inga Koszalka	4	Ocean dynamics

Seminar	Hours	Contents
Prof. Markus Meier	6	Students' presentations supervised by Markus Meier

Exercises and tutorials	Hours	Contents
Prof. Markus Meier, Dr. Sebastian Wagner, Dr. Inga Koszalka	16	Exercises, tutorials, and students group work supervised by Markus Meier, Sebastian Wagner, Inga Koszalka, Leonie Barghorn and Lev Naumov