

ORDS-MV MEETS THE SEA

**JOIN US FOR A FULL-DAY
WORKSHOP AND NETWORKING
EVENT FOCUSED ON MARINE AND
GEOSPATIAL RESEARCH DATA**

14.10.2024

Leibniz Institute for Baltic Sea Research Warnemünde

9:30am to 5pm

Registration: stat-consult@fbn-dummerstorf.de



PROGRAM

9:30 WELCOME

Welcome at IOW

9:45 WORKSHOP: GEOREFERENCED OCEANOGRAPHIC DATA RESOURCES AT IOW

Susanne Foistel (Leibniz Institute for Baltic Sea Research Warnemünde (IOW))

11:00 HANDS-ON WORKSHOP: MAKING MAPS WITH OPEN DATA AND OPEN SOURCE SOFTWARE: R AND QGIS - PART 1

Dr. Anja Eggert (Research Institute for Farm Animal Biology (FBN))

12:00 KEYNOTE: NATIONAL DATA FOR INTERNATIONAL SCIENCE - THE EXAMPLE OF FISHERIES RESEARCH

Dr. Christian von Dorrien (Institute of Baltic Sea Fisheries, Thünen Institute)

13:00 LUNCH BREAK

14:00 HANDS-ON WORKSHOP - PART 2

Dr. Anja Eggert (Research Institute for Farm Animal Biology (FBN))

15:15 DEMO: FOUNDATION MODELS: REPOSITORIES, APIS AND FINE-TUNING

JProf. Stefan Lüdtko (University of Rostock, Institut Visual and Analytic Computing, Marine Data Science)

15:45 FAREWELL

16:00 SOCIALIZING WITH PIZZA

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HANDS-ON WORKSHOP

MAKING MAPS WITH OPEN DATA AND OPEN SOURCE SOFTWARE: R AND QGIS

We will explore the quickest ways to access and visualize geospatial marine data from open repositories using R. With a focus on showing how geospatial data can be integrated in a familiar tidyverse data-analysis workflow, we will demonstrate how R can be used for making maps. However, while R is powerful for data processing, QGIS could offer more intuitive mapping capabilities. The choice of tools is yours! We will use real-world examples from Baltic Sea environmental and fisheries data, and you will have the option to participate in hands-on exercises. This workshop is designed for R users at a basic level or those curious about what R can do, particularly in incorporating spatial data into their everyday workflows. Advanced GIS topics will not be covered.

*Anja Eggert works as a
Statistical Consultant at
the Research Institute for
Farm Animal Biology (FBN).*



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KEYNOTES

NATIONAL DATA FOR INTERNATIONAL SCIENCE - THE EXAMPLE OF FISHERIES RESEARCH

The availability of large pre-trained models (e.g., large language models, but also large pre-trained models for images or environmental data) leads to a paradigm change in machine learning: Instead of training new models from scratch for each task, researchers can now reuse and fine-tune large pre-trained models, often reducing the need for training data and providing impressive results. In this tutorial, I will show how the HuggingFace model repository and the transformers library for Python can be easily used to run and fine-tune foundation models. I will also briefly discuss ramifications for geospatial modeling and emerging climate foundation models.



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ORDS-MV NETWORK

Open Reproducible Data Science and Statistics (ORDS) is a scientific network in Mecklenburg-Vorpommern. Its goal is to bundle regional expertise in the fields of data analysis and statistics with open and reproducible science. The focus is on the exchange of expertise between doctoral candidates and postdocs, but all other interested scientists are also welcome.

Due to the interdisciplinary character of modern data-driven science, the network explicitly addresses all disciplines. Besides general questions of data analysis, statistics and reproducibility, the network also focuses on programming environments such as R and Python. While R is mainly used for statistical data analysis and data visualization, Python is especially common in the application of machine learning methods. Besides the actual data analysis, another central point is the management and versioning of data and source code. Modern tools such as the Git version control system, Jupyter notebooks and Docker containers can be used for this purpose.

We want to meet at regular intervals and inform each other about current projects and methods in the field of data analysis and statistics. Furthermore, we will organize seminars, workshops and other events.

More details:

<https://ords-mv.github.io>

Mailing list:

<https://www.listserv.dfn.de/sympa/subscribe/ords-mv>