Kirsten SCHULZE
Based in Munich, Germany
 github | linkedin

EDUCATION

M.Sc. IN OCEAN AND CLIMATE PHYSICS, UNIVERSITÄT HAMBURG   *Oct 2022 - Oct 2024 / Hamburg, DE*

- Advanced Courses: Coastal Remote Sensing, Sea Ice Physics, Machine Learning in Climate Science (using PyTorch).
- Active member of the Geophysics Student Council of the University of Hamburg.
- Thesis: "Evaluation of Snow Depth Retrievals from Differences in ICESat-2 and CryoSat-2 Freeboards Using In-Situ Measurements in the Weddell Sea".
- Member of the Emmy Noether Young Investigator Group **SNOWflAke**.
- GPA: 1.20

B.Sc. IN PHYSICS, JACOBS UNIVERSITY BREMEN   *Sep 2019 - Jun 2022 / Bremen, DE*

- Major: Physics | Minor: Society, Media and Politics
- Thesis: "Investigation of Water Surface Tension Phenomena using a Novel Approach" (Grade: 1.33).
- GPA: 2.01

INTENSIVE LANGUAGE STUDIES   *Gap Year 2018 - 2019 / Canterbury and Paris, GB and FR*

- Stafford House Canterbury: Cambridge English Advanced (C1) Exam Preparation course.
- EF Séjours linguistiques Paris: Intensive French lessons from beginner to Elementary level.

ABITUR, HERZOG-CHRISTIAN-AUGUST GYMNASIUM (GPA: 1.40)   *Sep 2010 - Jun 2018 / Sulzbach-Rosenberg, DE*

CONFERENCES AND WORKSHOPS

13TH ADVANCED TRAINING COURSE ON LAND REMOTE SENSING FOR SNOW AND GLACIER 16th - 20th *Sep 2024 / Innsbruck, AUT*

TRAINING COURSE ORGANISED BY THE EUROPEAN SPACE AGENCY IN COLLABORATION WITH THE UNIVERSITY OF INNSBRUCK

- Topics: Monitoring snow extent, albedo, snow depth, liquid water content, glacier flow velocity and elevation changes, etc.
- Enhanced hands-on experience with SNAP, QGIS, and ArcGIS for satellite data analysis.
- Presented a lightning talk on my Master's thesis results.
- Participated in a field excursion to the Hintertux Glacier, including a visit to the Nature's Ice Palace.

SNOW DEPTH ON ANTARCTIC SEA ICE: A BIG UNKNOWN 1st - 3rd *Jul 2024 / Delmenhorst, DE*

INTERNATIONAL SNOW WORKSHOP AT THE HANSE-WISSENSCHAFTSKOLLEG ORGANIZED BY STEFANIE ARNDT

- Engaged in in-depth discussions on the complexities of snow on Antarctic sea ice with an international group of researchers.
- Presented my Master's thesis project, gaining valuable feedback and insights from experts in the field.

ESA ACADEMY'S EARTH OBSERVATION REMOTE SENSING WORKSHOP 5th - 9th *Dec 2022 / Libin, BE*

WORKSHOP IN ESA ACADEMY'S TRAINING & LEARNING FACILITY LOCATED IN ESEC-GALAXIA, BELGIUM

- Topics: SAR (Synthetic Aperture Radar), Optical & Thermal Infrared Remote Sensing, EO Processing Workflow, Spatial Image Analysis, etc.
- Introduced to different Software such as SNAP, QGIS, ENVI and SARscape.

EXPERIENCE

UNIVERSITY OF BREMEN SECONDED TO THE GERMAN AEROSPACE CENTER (DLR)
Feb 2025 - Sep 2025 / Oberpfaffenhofen, DE

RESEARCH ASSOCIATE - RESEARCH IN CLIMATE PHYSICS

- Research focus: Improving Climate Models with Machine Learning and Earth Observation through Model-Data Fusion.
- Conducting research at the Earth System Model Evaluation and Analysis Department, within the Institute for Atmospheric Physics.
- Developing ML-based parameterizations for the ICON climate model using transfer learning and satellite data (e.g., EarthCARE).
- Tools & technologies: Python, PyTorch, TensorFlow, Bash scripting, and remote sensing data processing.
- Engaged in independent research and continuous learning in climate modeling and AI.

NETLIGHT CONSULTING GmbH
Jan 2024 - Jun 2024 / Hamburg, DE

WORKING STUDENT IN IT CONSULTING AS PART OF THE FINTA TECH ACADEMY

- Selected for the FINTA Tech Academy, a program supporting female, intersex, non-binary, trans and agender students in tech careers.
- Collaborated with Holi, a Hamburg-based social impact network, to develop skills in software development and consulting.
- Developed backend features in Django for the Holi app, which connects individuals and nonprofits for social and environmental impact.
- Utilized Strawberry GraphQL and PostgreSQL for database management and data retrieval.
- Actively contributed to the open source project **holi: Social & Eco Impact**.
- Gained hands-on experience in stakeholder management and practised agile methodologies.

REMOTE SENSING SOLUTIONS GmbH
Aug 2023 - Sep 2023 / Munich, DE

REMOTE SENSING AND GIS INTERN

- Contributed to the project **ADM-Kenya** (drought monitoring in agricultural areas in Kenya) by validating cropland masks using Python.
- Analyzed Surface Water Dynamics trends with QGIS for the **REWET** project (wetland restoration for emission reduction and carbon uptake).
- Utilized eCognition Developer, a geospatial software, to classify land cover types in Open Labs for the REWET project.
- Developed a Google Earth Engine app in JavaScript to derive NDVI trends over time using satellite data from Landsat 5, 7, 8, 9.

JACOBS UNIVERSITY BREMEN
Feb 2022 - Jun 2022 / Bremen, DE

TEACHING ASSISTANT FOR GEOPHYSICAL REMOTE SENSING

- Prepared and held weekly tutorials on Python, LaTeX and Earth Observation tools.
- Reviewed and provided feedback on student project reports.

BYK-GARDNER GmbH
Jun - Jul 2021 / Geretsried, DE

PRODUCT DEVELOPMENT INTERN

- Worked on current research and development topics, focusing on the optimization of existing instruments.
- Conducted feasibility studies as groundwork for new instrument concepts and selected equipment standards for a new production robot.
- Independently collected data through experimental setups and prototypes, plus analyzed and evaluated data using a C# application.
- Worked closely with the production team and presented research results to the marketing team.

SKILLS AND INTERESTS

PROGRAMMING LANGUAGES	*Experienced:* Python *Familiar:* C#	JavaScript	MATLAB *Beginner:* Fortran	C++
TECHNOLOGICAL SKILLS	*Experienced:* Microsoft Excel	Microsoft Word	PowerPoint	Outlook	Git
SOCIETIES AND CLUBS	Jacobs Alumni Association	Deutscher Alpenverein	Deutscher Skilehrerverband
OPERATING SYSTEM	*Experienced:* Windows	macOS *Familiar:* Linux
LANGUAGE SKILLS	*Native:* German *Fluent:* English *Basic:* Spanish	French *Latinum Magnum:* Latin
SOFT SKILLS	Research and analytical skills	Ambitious	Good time management	Creativity	Reliability
HOBBIES	Skiing (Ski Instructor of the Deutsche Skilehrerverband since 2016)	Rowing	Climbing	Hiking