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Varvara Bazilova

GitHub

EDUCATION

Master of Science, University of Oslo, Department of Geoscience (hydrology and glaciology) **2019 — 2021**
Thesis: "Glacial lake changes from cloud processing of optical satellite images"; 60 ECTS

Master of Science, Lomonosov Moscow State University, Faculty of Geography (hydrometeorology) **2017 — 2019**
Graduation research project: "Sediment budget of a proglacial river: case study of Tarfala River, Sweden", 6 ECTS)

Bachelor of Science, Lomonosov Moscow State University, Faculty of Geography (hydrometeorology) **2013 — 2017**
Graduation research project: "Sediment yield of the glacierized catchment (case study of Djankuat river, Northern Caucasus)"
3rd year research project: "Estimation of suspended sediment concentration in Selenga river delta using remote sensing multi-spectral data"

ADDITIONAL COURSES

ACE Maritime University, Swiss Polar Institute, floating university (school of oceanography as part of Antarctic Circumnavigation Expedition) **2016**
The University Centre in Svalbard (UNIS), Arctic Infrastructures in a Changing Climate; Arctic Technology Department; 10 ECTS **2018**

PROFESSIONAL APPOINTMENTS

Research intern
University of Zürich (UZH): World Glacier Monitoring Service (WGMS) **September 2021 — Dec 2021**

- Data quality control for glacier mass balance bulletin

Research assistant (part-time)
University of Oslo (UiO) **July 2021 — Dec 2021**

- Detection of global glacier surge activity using Sentinel-1 SAR data and Google Earth Engine

Research assistant (part-time)
Norwegian Water Resources and Energy Directorate (NVE) **Aug 2020 — March 2021**

- Mapping wet snow using Sentinel-1 SAR data
- Making glacier velocity maps in Svalbard (Copernicus Glacier Service project)

Research/teaching assistant (part-time)
University of Oslo (UiO) **July 2020 — Nov 2020**

- SAR Interferometry for DEM generation over glaciers
- Teaching assistant for Remote Sensing courses: supporting ArcGIS exercises and Google Earth Engine assignments

Expert
Ecosky LLC (Russia) **Jan 2019 — May 2019**

- GIS mapping for ecology and hydrology surveys
- Processing of field survey data, data visualization

Field assistant
Tarfala Research Station (TRS), Stockholm University **June 2018 — July 2018**

- Field measurements for the TRS monitoring program (glacier mass balance, hydrology, meteorology, phenology)
- Daily routine tasks at the station

Technician
Lomonosov Moscow State University (Geography department) **June 2016 — Oct 2016**

- Fieldwork assistance: hydrological measurements (discharge, turbidity)
- Laboratory grain size analysis of the suspended sediments ("Pollution of Selenga river: lake Baikal hydrological system: evaluation and forecast" project)

TEACHING EXPERIENCE

Remote Sensing (GEO3515)

Bachelor/Master level

Fall Semester 2020

University of Oslo

Advanced remote sensing and topographic analysis (GEO4520)

Master/PhD. level

Fall Semester 2020

University of Oslo

FIELDWORK EXPERIENCE

Research field campaigns/projects participation:

- Western Dvina (Daugava) river basin:
"Management of Trans-boundary Rivers between Ukraine, Russia and the EU (ManTRA-Rivers)" 2018
- Tarfala Research Station, Sweden:
"Fluvial sediment transport characteristics in periglacial and glacial environments of Northern Sweden (SedTraC)" project, within INTERACT research activities 2018
- Djankuat glacier, Russia:
mountain hydrology, suspended and bed-load sediment yield, glacier mass-balance measurements 2016, 2018
- Selenga delta, Russia:
sediment yield formation research 2016
- Chon-Kyzyl-Suu river, Karabatkak glacier, Kyrgyzstan:
mountain hydrology 2015

Winter expeditions of Scientific Student Society (Moscow State University):

- Winter hydrological regime of Valdai lakes research, Russia 2016
- Complex study of lakes and the atmospheric boundary layer dynamics at the West coast of the White sea in winter, Russia 2015
- Levels, discharge and water quality generation investigation in Amur river, Khabarovsk region, Russia 2014

PUBLICATIONS

1. Chalov, S. R., Bazilova, V. O. & Tarasov, M. K. Modelling suspended sediment distribution in the Selenga River Delta using LandSat data. *Proceedings of the International Association of Hydrological Sciences* **375**, 19–22 (2017).
2. Chalov, S., Bazilova, V. & Tarasov, M. Suspended sediment balance in Selenga delta at the late XX–early XXI century: Simulation by LANDSAT satellite images. *Water Resources* **44**, 463–470 (2017 (in Russian)).
3. Bazilova, V., Chalov, S. & Tsyplenkov, A. in *Climate Change Impacts on Hydrological Processes and Sediment Dynamics: Measurement, Modelling and Management* 34–38 (Springer, 2019).
4. Kasimov, N. *et al. Environmental Atlas-monograph "Selenga-Baikal" / Editor: N. Kasimov* (MSU Geography faculty, Russian Geographical Society (RGO), Moscow, 2019 (in Russian)).

TECHNICAL SKILLS

Language	English (C1), German (A2), Norwegian (basic), Russian (native)
GIS and Hydrology	ArcMap, QGIS, SNAP, Google Earth Engine, HBV
Programming	Python, R, JavaScript

REFERENCES

Prof. Dr. Andreas Käab

University of Oslo (UiO)

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