Zhihao LIU

Nationality: Chinese   **Date of birth:** 26/03/1993

📞 **Phone number:** (+47) 48648781   ✉ **Email address:** zhihaol@uio.no

🌐 **Website:** www.zhihaol.eu.org

📍 **Home:** Olav M. Troviks vei 10, 0864 OSLO (Norway)

WORK EXPERIENCE

Research Assistant on Geomatics
UiO [12/2021 – Current]

- Geostatistics and Geospatial **Modeling** with Python. My modeling toolbox includes xDEM (co-registration), SciPy (optimizing, interpolation), Rasterio, Shapely, Geopandas, Multiprocessing, PCA, and Machine learning (XGBoost regression), etc.
- Work on **Dataset** from the Field trip (LiDAR Drone), remote sensing, or open access: ICESat-2, MODIS, Norway National DEM 1/10, Global DEM (Copernicus, Arctic DEM, etc.)
- **GIS** tools: ArcGIS, QGIS, and my own automating script.

Field Technician / Geomatics Professional
BGP OFFSHORE, CNPC [07/2014 – 06/2021]

- 3D/4D/OBN **Offshore Seismic Surveys** as navigator and technician globally (Norway, UK, West Africa)**.**
- Coding for Seismic: optimized workflows by data-driving solutions.
- Worked with a world-class seismic team in a multicultural environment & QHSE culture.
- Get promoted to Assistant Party Chief.
- Register of Licensed Surveyors of P.R.C.

EDUCATION AND TRAINING

Master in Geoscience
Universitetet i Oslo [08/2021 – Current]

Address: Oslo (Norway)

Curriculum: Advanced Remote Sensing and Topographic Analysis | IPCC AR6 Seminar | The Surface Energy Balance in Cold Environment | Floods, Avalanches and Landslides | Surveying, Photogrammetry and Spatial Analysis | Geophysical Data Science | Glacial and Periglacial Geomorphology
Thesis: Benchmarking DEM Precision: Workflows and Applications on Snow Depth.
Reports:
- Change Detection on Agriculture: a case study of the Western Nile Delta in Egypt
- Validating and Mapping Lake Surface Temperature from MODIS: a case study of Lakes in Sweden
- Stereo-derived DEMs, Assessment, Validation, and Change Detection: a case study...
- How to bury Longyearbyen by an avalanche: Mass movement modeling
- Oslo Housing Price MCDA Model: a perspective from spatial contributions
- What if the ice block expedition 1959 happens in 2021? You can not blame it on climate change

Field(s) of study
- Geomorphology and Geomatics

Bachelor in Geodesy and Geomatics
South West Petroleum University [08/2010 – 07/2014]

Address: Chengdu (China)

- With a background in Engineering, Cartography, GNSS and GIS.
- GPA overall 83/100 major, A for bachelor's thesis (A WebGIS system for urban infrastructure management).

LANGUAGE SKILLS

Mother tongue(s): **Chinese**

Other language(s): **English (Professional working proficiency)** | **Norwegian (pre-beginner)**

DIGITAL SKILLS

Automating GIS / Data-driving Solution / Data QC & Processing / QGIS / Numerical Modeling / ArcGIS / Python

PROJECTS

North Sea Quad 35 Hybrid 3D seismic survey

[07/2020 – 10/2020]

[Quad 35 is the first hybrid seismic combined streamers and nodes](#) for commercial purposes. I worked as a technician for contract technical review, onboard acquisition, data QC & reprocessing, and follow-up work. I was the person who dug deepest into the data quality of Q35. And I got [the best commendation](#) from the client for modeling this novel acquisition to make it more efficient and understandable.

SNOWDEPTH – Global snow depths from spaceborne remote sensing for permafrost, high-elevation precipitation, and climate reanalysis

[01/2022 – Current]

This research is key to understanding the snow-depth-related climate mechanism or application, e.g. permafrost, high-mountain precipitation, hydropower...As a research assistant, I joined the field (drone) trip and work on the ICESat-2 dataset and a variety of DEM products; thus far, I am able to generate snow depth measurements for entire Norway. Later, I am trying to interpolate and feed the data into the climate/hydrological models and contribute to the open source community of the cryosphere.

HOBBIES AND INTERESTS

Marathon

- Not bad runner with 130 (half-marathon) and 330 (marathon) of the personal best.
- Have organized medium size marathon (15K) and was in charge of supply and volunteers.

REFERENCES

2016 - 2021:

Chief geophysicist of BGP Prospector, [Bo Wen](#), Email: wenbo01@cnpc.com.cn, Mobile: +86 18622259275

2021 - Present

Project Leader and Co-supervisor, [Désirée Treichler](#), Email: desiree.treichler@geo.uio.no, Mobile: +47 22857869

2021 - Present

Professor and Supervisor, [Andreas Max Kääb](#), Email: a.m.kaab@geo.uio.no, Mobile: +47 22855812