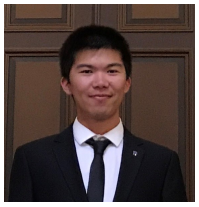
SHUNAN FENG

Remote Sensing
Modelling
Spatial Analysis



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WHO AM I?

A self motivated learner. Passionate in remote sensing, modelling and spatial analysis.
I am interested in understanding the process and climate response of earth surface, particularly time series analysis by combining the in-situ measurement, remote sensing or other geospatial data and model results. I have been learning and practicing skills in with remote sensing imagery processing, modelling, spatial statistics, data analysis and visulization with MATLAB, Python, Google Earth Engine (JavaScript/Python), ENVI/IDL and ArcGIS etc. Interested in remote sensing, glaciology.

MATLAB
Google Earth Engine
Python
GIS
ENVI/IDL
LaTeX

WORK EXPERIENCE

09/2019 -– present **Remote Sensing and GIS Associate** — **International Committee of the Red Cross, Switzerland**

- Processing and analyzing remote sensing imagery (Digital Globe, Airbus, drone image etc.).
- Benchmarking machine learning for landcover classification, change detection, damage assessment and agricultural monitoring.
- Organize internal training of geospatial data analysis.
- Producing webmaps and supporting emergency response to humanitarian crisis.

`ArcGIS Pro/Online / Google Earth Engine / Python(rasterio, altair, plotly) / Pix4D/OpenDroneMap`

EDUCATION

2017 – 2019 **MSc in Earth Science** — **Uppsala University, Sweden**
Thesis: Cold Surface Layer Dynamics of Storglaciären, Northern Sweden 2009-2019
Specialized in remote sensing and modelling of glaciology and hydrology. Condcuted fieldwork at Tarfala Research Station. Spatial analysis and statistics at different scale.
`MATLAB / Google Earth Engine / LaTeX / Git GitHub`

2013 – 2017 **BSc in Physical Geography** — **Central China Normal University, China**
Thesis: Retrieval of Chlorophyll-A Concentration from 30-year Landsat Imagery in Erhai, China.
Specialized in remote sensing of water and spatial analysis.
`ENVI/IDL / ArcGIS`

SCHOLARSHIPS AND AWARDS

2018 – 2019 **Linnaeus Scholarship (12,700 SEK), Otterborg Stipend (15,000 SEK),Jänes Scholarship (3,700 SEK)** — **Uppsala University**
Research and Travel Scholarship for conducting thesis fieldwork

2017 **Uppsala University IPK Scholarship** — **Uppsala University**
cover all tuition fee (290,000 SEK)

2014 – 2016 **Shuren Silver Scholarship (2014) and Boya Scholarship (2015, 2016)** **Central China Normal University**

LANGUAGES

Chinese - native
English - proficient

CURRENT STATUS

Currently interested in machine learning and tensorflow. Also practicing interactive data visualization with python modules (e.g. altair, plotly etc.).

ACADEMIC EXPERIENCE

11/2018 – 01/2019 **Drought analysis with Google Earth Engine**

manusript will be submitted to a peer-reviewed journal **Uppsala University, Sweden**

• Investigating vegetation response to meteorological drought.
• Spatial correlation of SPEI and NDVI anomalies in Google Earth Engine.
`MATLAB / Google Earth Engine / R(SPEI)`

06/2018 – 04/2019 **Cold Surface Layer Dynamics**

Degree Project Fieldwork **Tarfala Research Station, Sweden**

Fieldwork: Measure the glacier subsurface temperature by manufacturing and installing a thermistor string in the ablation zone of Storglaciären.
`Thermistor String installation / Glaciology / Geophysical Survey`

03/2018 – 04/2019 **Glacier Surface Velocity Reconstruction** **Uppsala University, Sweden**

• Derive glacier surface velocity from Landsat series imagery. Historical surge events are identified by the reconstructed glacier surface velocity.
• Image processing (cloud detection, georeferencing by a discrete fast Fourier transform); surface feature track (COSI-CORR).
`MATLAB / ENVI/IDL`

03/2017 – 08/2017 **Erhai Lake Projec**

Continuation of bachelor's thesis **Central China University**

Retrieve chlorophyll-a (Chl-a) concentration from Landsat imagery using a modified three-band model. Algorithm experiment using ENVI/IDL. (Continuation of bachelor thesis)
`ENVI/IDL / ArcGIS`

03/2015 – 03/2016 **The classification of sea ice in the Canadian Arctic Archipelago during summer using MODIS data**

Central China University

Sea ice classification from MODIS data by combining weekly released digital Arctic regional sea ice charts from Canadian Ice Service; ENVI; reflectance analysis.
`ENVI/IDL / ArcGIS`

PUBLICATION AND CONFERENCE

- **Peer Reviewed Article**:

1. Tan, W., Liu, P., Liu, Y., Yang, S., **Feng, S.**, 2017. A 30-Year Assessment of Phytoplankton Blooms in Erhai Lake Using Landsat Imagery: 1987 to 2016. Remote Sensing 9, 1265. https://doi.org/10.3390/rs9121265

- **Conference**:

1. **Feng, S.** and Pettersson, R., 2019. Surge Type Glacier Identification on Northeast Spitsbergen, Svalbard from Landsat Imagery 1984-2018 (poster EGU2019-135)
2. Fileni, F., **Feng, S.**, Erikson., T, Winterdahl, M., Pettersson, R., Spatial and temporal analysis of vegetation response to meteorological droughts in California, 1984-2018 (poster EGU2019-19137)