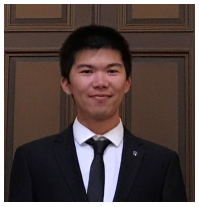
SHUNAN FENG

Remote Sensing
Modelling
Spatial Analysis



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WHO AM I?

A self motivated learner. Passionate in remote sensing, modelling and spatial analysis.
The best thing about earth science to me is the combination of geospatial data analysis, visualization and fieldwork. 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. My experience with remote sensing imagery processing, modelling, spatial statistics, data analysis and visulization enables me to learn and practice skills with MATLAB, Python, Google Earth Engine, ENVI/IDL and ArcGIS etc.

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 satellite imagery (high resolution data from 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 and Online Services / Google Earth Engine / Python`

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`

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`

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 at EGU2019)
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 at EGU2019)