Kuan-Fu Feng

10+ years of experience specializing in Time Series Analysis, Signal Processing, and Physical Modeling of geophysical data.

Research project

Seismology for Groundwater Evaluation

Lead Developer

- Utilizing high-resolution time series data to identify time-lapse variations in seismic properties associated with subsurface water
- Implementing inversions methods to model groundwater-surface interactions
- Collaborating with interdisciplinary teams to improve hydro-geophysical monitoring methodologies

Skill

Programming Language	Python, Fortran, C, C++, Bash Script
Data visualization	ParaView, Adobe Illustrator, Matplotlib
Software	Scikit learn, Seaborn, Jupyter notebook
Version Control	Git/GitHub
Cloud environment	AWS
Technical	Time series analysis, Data visualization, Statistical analysis, Linux environment

Work Experience

Postdoctoral Researcher

University of Utah, USA *Dec 2024 - present*

- Conducting geophysical analysis to evaluate time-lapse groundwater evolution

Postdoctoral Scholar

University of Washington, USA *Jun 2023 - Nov 2024*

- Engaged in developing data-driven models to quantify groundwater-surface interactions using seismic datasets
- Contributing to an open-source software package development dedicated to environmental seismology
- Implementing cloud computing for seismic data processing
- Serving as an instructor for hands-on workshops

Postdoctoral Scholar

University of Utah, USA *Jun 2022 - May 2023*

- Leveraging 10+ TB of high-resolution time-series data for time-lapse analysis
- Investigated the impact of ambient noise sources across multiple scales of seismic arrays

Research Assistant *full-time*

Institute of Earth Sciences, Academia Sinica, Taiwan *Oct 2016 - Aug 2017*

- Maintaining and offline testing for Real-time Earthquake Moment Tensor Monitoring System
- Building up finite fault models of subduction zones

Education

PhD	*Geosciences, National Taiwan University, Taiwan*	*Sep 2017 - Jan 2022*
Master	*Geosciences, National Taiwan University, Taiwan*	*Sep 2014 - Jun 2016*
Bachelor	*Earth and Environmental Sciences, National Chung Cheng University, Taiwan*	*Sep 2010 - Jan 2014*

Pre-print

R=Under Review

[**R.1**] Feng, K.-F., et al. **A decadal survey of the near-surface seismic velocity response to hydrological variations in Utah, United States.**. *submitted to the Journal of Geophysical Research: Solid Earth.*

[**R.2**] Denolle, M., et al. **Training the Next Generation of Seismologists: Delivering Research-Grade Software Education for Cloud and HPC Computing through Diverse Training Modalities.** *submitted to Seismological Research Letters*

Publication

J=Journal, P=In Preparation

[**J.1**] Feng, K.-F., et al. (2021). **Controls on seasonal variations of crustal seismic velocity in Taiwan using single-station cross-component analysis of ambient noise interferometry.**. *Journal of Geophysical Research: Solid Earth*, 126(11), e2021JB022650.

[**J.2**] Feng, K.-F., et al. (2020). **Detecting pre-eruptive magmatic processes of the 2018 eruption at Kilauea, Hawaii volcano with ambient noise interferometry.**. *Earth, Planets and Space*, 72, 74.

[**J.3**] Hsu, Y.-F., et al. (2020). **Evidence for Fluid Migration During the 2016 Meinong Taiwan Aftershock Sequence.**. *Journal of Geophysical Research: Solid Earth*, 125(9), e2020JB019994.

[**J.4**] Lee, S.-J., et al. (2018). **Composite megathrust rupture from deep interplate to trench of the 2016 Solomon Islands earthquake.**. *Geophysical Research Letters*, 45(2), 674-681.

[**J.5**] Brown, D., et al. (2015). **Imaging high-pressure rock exhumation in eastern Taiwan.**. *Geology*, 43(7), 651-654.

[**P.1**] Feng, K.-F., et al. **Investigating near-surface seismic attenuation across the Pacific Northwest of the United States using ambient noise.**. *TBD.*

[**P.2**] Kidiwela*, M., Feng, K.-F., et al. **Long-Term Signatures of Interseismic Deformation within Cascadia Subduction Zone Using Ambient Noise Interferometry.**. *TBD.*