Curriculum Vitae

Kuan-Fu Feng 馮冠芙

Postdoctoral Research Associate

Geology and Geophysics, University of Utah

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GitHub: https://github.com/kuanfufeng
Personal website: https://kuanfufeng.github.io/personal_web
Google Scholar: https://scholar.google.com/citations?user=cFcJgigAAAAJ&hl=en&oi=ao
ResearchGate: https://www.researchgate.net/profile/Kuan-Fu-Feng

Research Interest

Environmental seismology, Volcanic seismology, Spatiotemporal changes in near-surface processes

Research Experience

2024/12 – present Postdoctoral Research Associate, Geology and Geophysics, University of Utah, US
2023/06 – 2024/11 Postdoctoral scholar, Earth and Space Sciences, University of Washington, US
2022/06 – 2023/05 Postdoctoral scholar, Geology and Geophysics, University of Utah, US
2022/02 – 2022/05 Postdoctoral scholar, Institute of Earth Sciences, Academia Sinica, Taiwan
2016/10 – 2017/08 Research assistant, Institute of Earth Sciences, Academia Sinica, Taiwan
2014/02 – 2014/06 Research assistant, National Chung Cheng University, Taiwan
2013/07 – 2013/08 Summer intern, Institute of Earth Sciences, Academia Sinica, Taiwan

Education

2017/09 – 2022/01 Ph.D., Geosciences, National Taiwan University, Taiwan
Advisor: Dr. Hsin-Hua Huang and Dr. Yih-Min Wu
2014/09 – 2016/06 M.S., Geosciences, National Taiwan University, Taiwan
Advisor: Dr. Yih-Min Wu
2010/09 – 2014/01 B.S., Earth and Environment Sciences, National Chung Cheng University, Taiwan

Manuscripts in Preparation

Feng, K.-F.*, M. Denolle and Y. Ni (*in prep*). Measuring shallow seismic attenuation in the Pacific Northwest and southern California of the United States using ambient noise seismology.

Preprints

Feng, K.-F.*, M. Denolle, F-C. Lin and T. van Dam. (***preprint, 2024***) A decadal survey of the near-surface seismic velocity response to hydrological variations in Utah, United States. https://doi.org/10.31223/X52425 (*under review in the Journal of Geophysical Research: Solid Earth*)

Denolle, M.*, Tape, C., Bozdağ, E., Wang, Y., Waldhauser, F., Gabriel, A.A., Braunmiller, J., Chow, B., Ding, L., **Feng, K.-F.**, Ghosh, A., et al. (***preprint*, 2025**). Training the Next Generation of Seismologists: Delivering Research-Grade Software Education for Cloud and HPC Computing through Diverse Training Modalities. arXiv preprint:2409.19147. https://doi.org/10.48550/arXiv.2409.19147

M. Kidiwela*, M. Denolle, WSD Wilcock, **K.-F. Feng** (***preprint, 2025***). Active Protothrusts and Fluid Highways: Seismic Noise Reveals Hidden Subduction Dynamics in Cascadia. arXiv preprint arXiv:2505.15731 https://doi.org/10.48550/arXiv.2505.15731 (*under review, confidential)*

Ni, Y.*, M. Denolle, J. Münchmeyer, I. Wang, **K.-F. Feng**, C.G.J. Suarez, A.M. Thomas, C. Trabant, A. Hamilton, and D. Mencin (***preprint, 2025***). A Review of Cloud Computing in Seismology. arXiv

preprint arXiv:2506.11307. https://doi.org/10.48550/arXiv.2506.11307 (*under review in Geophysical Journal International*)

Peer-Reviewed Publication

Denolle, M.*, Tape, C., Bozdağ, E., Wang, Y., Waldhauser, F., Gabriel, A.A., Braunmiller, J., Chow, B., Ding, L., **Feng, K.-F.**, Ghosh, A., et al. (**2025**). Training the Next Generation of Seismologists: Delivering Research-Grade Software Education for Cloud and HPC Computing through Diverse Training Modalities. *Seismological Research Letters*. https://doi.org/10.1785/0220240413

Feng, K.-F.*, H.-H. Huang*, Ya-Ju Hsu and Y.-M. Wu (**2021**), Controls on seasonal variations of crustal seismic velocity in Taiwan using single-station cross-component analysis of ambient noise interferometry, *J. Geophys. Res., Solid Earth, e2021JB022650.* https://doi.org/10.1029/2021JB022650.

Hsu, Y.-F., H.-H. Huang*, M.-H. Huang, V. C. Tsai, R. Y. Chuang, **K.-F. Feng** and S.-H. Lin (**2020**), Evidence for Fluid Migration During the 2016 Meinong Taiwan Aftershock Sequence, *J. Geophys. Res., Solid Earth, 125(9), e2020JB019994.* https://doi.org/10.1029/2020JB019994.

Feng, K.-F., H.-H. Huang* and Y.-M. Wu (**2020**), Detecting pre-eruptive magmatic processes of the 2018 eruption at Kilauea, Hawaii volcano with ambient noise interferometry. *Earth, Planets and Space*, 72:74. https://doi.org/10.1186/s40623-020-01199-x

Lee, S.-J.*, T.-C. Lin, **K.-F. Feng**, and T.-I. Liu (**2018**), Composite megathrust rupture from deep interplate to trench of the 2016 Solomon Islands earthquake. *Geophysical Research Letters*, 45(2), 674-681. https://doi.org/10.1002/2017GL076347

Brown, D.*, Y.-M. Wu, **K.-F. Feng**, W.-A. Chao, and H.-H. Huang (**2015**), Imaging high-pressure rock exhumation in eastern Taiwan. *Geology*, 43(7), 651-654. https://doi.org/10.1130/G36810.1

Conference Presentation

2024 American Geophysical Union (AGU) Fall Meeting, California, US

Long-Term Signatures of Interseismic Deformation within Cascadia Subduction Zone Using Ambient Noise Interferometry (Oral, Co-author)

2024 Seismological Society of America (SSA) Meeting, Alaska, US

Measuring shallow seismic attenuation across the Pacific Northwest of the United States using ambient noise seismology. Abstract S23C-0387 (Poster, First author)

2023 American Geophysical Union (AGU) Fall Meeting, California, US

A decadal survey of the near-surface seismic velocity response to hydrological variations in Utah, United States. Abstract H54C-06 (Oral, First author)

Investigating seismic attenuation across the Pacific Northwest of the United States using ambient noise. Abstract S23C-0387 (Poster, First author)

Depth-Dependent Hydrological Processes in Shallow Crust Revealed by Multi-Frequency Seismic Velocity Changes in Taiwan (Poster, Co-author)

Cloud Computing in Seismology: lessons learned from machine-learning and cross-correlation applications in research and education (Poster, Co-author)

2023 NSF Geodetic Facility for the Advancement of Geoscience (GAGE) and NSF Seismological Facility for the Advancement of Geoscience (SAGE) 2023 Community Science Workshop, Pasadena, California, US

Investigating seismic velocity response to near-surface hydrological variations in Utah, United States. Abstract no. 100. (Poster, First author)

2022 American Geophysical Union (AGU) Fall Meeting, Chicago, US

Investigating near-surface hydrological responses on crustal seismic velocity variations in subtropical and semi-arid regions. Abstract S15D-0230 (Poster, First author)

2022 The 5th Taiwan Earthquake Center (TEC) Annual Meeting, Taiwan

A Noise-Based Monitoring System of Crustal Seismic Velocity Changes in Taiwan. (Oral, First author)

2021 American Geophysical Union (AGU) Fall Meeting, ONLINE

Assessment of controlling factors on seasonal variations of crustal seismic velocity in Taiwan using ambient noise single-station cross-component analysis. (Poster, First author)

2020 Geological and Geophysical Annual Meeting, Taiwan

Single-station cross-component analysis of ambient noise reveals seasonal crustal seismic velocity variations in Taiwan. Abstract S3-O-02. Session: S3 (Oral, First author)

Co-seismic variations in crustal seismic velocity related to M6+ earthquakes in Taiwan. Abstract S3-PC-006 (Poster, First author)

2020 The 4th Taiwan Earthquake Center (TEC) Annual Meeting, Taiwan

Single-station cross-component analysis of ambient noise reveals seasonal crustal seismic velocity variations in Taiwan. Abstract P01 (Poster, First author)

2019 American Geophysical Union (AGU) Fall Meeting, California, US

Detection of a precursory phase of the 2018 magma eruption in the Lower East Rift Zone of Kilauea volcano, Hawaii. Abstract: 508923. Session: V43B-03 (Oral, First author)

2019 European Geosciences Union (EGU) Annual Meeting, Vienna, Austria

Detection of a precursory phase of the 2018 magma eruption in the Lower East Rift Zone of Kilauea volcano, Hawaii. Abstract: EGU2019-3322 (Poster, First author)

2018 The 3th Taiwan Earthquake Center (TEC) Annual Meeting, Taiwan

Revealing pre-eruptive phase of the magma extrusion in lower East Rift Zone of Kilauea volcano, Hawaii. Abstract P02 (Poster, First author)

2018 The 15th Asia Oceania Geosciences Society (AOGS) Meeting, Hawaii, US

Near real-time monitoring system of the seismic velocity changes in Taiwan. Abstract SE03-A023 (Poster, First author)

2017 American Geophysical Union (AGU) Fall Meeting, New Orleans, US

Transpressional Structure in Chiayi Area, Taiwan: Insight from the 2017 ML5.1 Zhongpu Earthquake Sequence. Abstract T43C-0719 (Poster, First author)

2017 Geological and Geophysical Annual Meeting, Taiwan

Near real-time monitoring system of the seismic velocity changes in Taiwan. Abstract SP-074 (Poster, First author)

2016 Geological and Geophysical Annual Meeting, Taiwan

Investigating the uncertainty of time-dependent seismic velocity changes using travel time tomography: a case study of the M_L 6.4 2013 Rueisuei earthquake, Taiwan. Abstract PP-319 (Poster, First author)

2015 The 26th International Union of Geodesy and Geophysics General Assembly, Czech Republic

Temporal changes of seismic velocity in crust associated with M_L>6.0 earthquakes, Taiwan in recent years. Abstract S01bp-323. (Poster, First author)

2015 European Geosciences Union General Assembly Conference, Vienna, Austria

Imaging high-pressure rock exhumation along the arc-continent suture in eastern Taiwan. Vol. 17, EGU2015-4304, 2015. (co-author)

Professional Services/Volunteer Experiences

Peer reviewer for *Geophysical Research Letters (2)*, *Journal Geophysical Research (5)*, *Nature Communications (1)*, *Earth, Planets and Space (1)*

2024 Workshop Instructor on Ambient Noise Seismology in the Cloud, Seismic COmputational Platform for Empowering Discovery (SCOPED) Seattle Workshop

2024 Workshop Instructor on Data Mining on the Cloud 101, Seismological Society of America Meeting

2019 Summer Student Lecture Convenor, Institute of Earth Sciences, Academia Sinica, Taiwan

2018 Summer Student Lecture Convenor and Instructor, Institute of Earth Sciences, Academia Sinica, Taiwan

2018 President of the Graduate Student Association, Geosciences, National Taiwan University

Grants and Fellowships

2023 GAGE/SAGE 2023 Community Science Workshop Travel Grant

2022 Postdoctoral Research Abroad Fellowship, Ministry of Science and Technology, Taiwan

2021 Professor Yi-Ben Tsai Graduate Student Scholarship, Chinese Taipei Geophysics Society

2019 Travel Grant for attending international conferences, Institute of Earth Sciences, Academia Sinica, Taiwan

2019 Travel Grant for attending international conferences, Chinese Taipei Geophysics Society

2018 Travel Grant for attending international conferences, Ministry of Science and Technology, Taiwan

2015 Travel Grant for attending international conferences, Ministry of Science and Technology, Taiwan

2013 Excellent Student Scholarship, Chinese Taipei Geophysical Society

2012 Outstanding Student Scholarship, National Chung Cheng University

2011 Outstanding Student Scholarship, National Chung Cheng University

2010 Outstanding Student Entrance Scholarship, National Chung Cheng University

Awards and Honors

2023 Professor Weizhou Ruan Memorial Fund Dissertation Award, Geological Society Located in Taipei

2022 Dean's Award, College of Science, National Taiwan University

2022 Phi Tau Phi Scholastic Honor Society Membership of the Republic of China

2019 Outstanding Student Paper Awards in International Conferences, Earth Science Research Promotion Center (ESRPC), Taiwan

2019 Invited talk at Workshop on Frontiers in Seismic Interferometry, Institute of Earth Sciences, Academia Sinica, Taiwan

Teaching Assistantships

Geo2006, Geophysics, National Taiwan University

Geo5073, Time Series Analysis, National Taiwan University

Geo5101, Computer Programming on Geosciences, National Taiwan University

Field Experience

2022 Nodal seismic array deployment in Los Angeles Basin [LAB2022]

2019 Taiwan Chu-Lin landslide area monitoring seismic array deployment

2018 Taiwan Lan-Tai landslide area monitoring seismic array deployment

Computational Skills

Fortran | C | C++ | Python | Git & GitHub | Bash script | Linux environment

Thesis and Dissertation

Feng, K.-F. (**2022**) Noise-based monitoring on crustal seismic velocity variations. *PhD Dissertation, National Taiwan University.* (Supervisor: Dr. Hsin-Hua Huang and Dr. Yih-Min Wu)

Feng, K.-F. (**2016**) Investigating the uncertainty of time-dependent seismic velocity changes using travel time tomography: a case study of the M_L 6.4 2013 Rueisuei earthquake, Taiwan. *Master Thesis, National Taiwan University.* (Supervisor: Dr. Yih-Min Wu)

Outreach

以地震噪訊干涉法探測 2018 年夏威夷 Kilauea 火山噴發前的地下岩漿活動, Taiwan Earthquake Research Center, Newsletter Press 29. (https://tec.earth.sinica.edu.tw/publication/newsletter/html/202009/29_04.php)