

Meng (Matt) Wei

Education	Ph. D. in Earth Sciences , University of California at San Diego, 2011. B. S. in Geophysics , Peking University, Beijing, China, 2004.
------------------	---

Appointment	Associate Professor , University of Rhode Island, 07/2021. Assistant Professor , University of Rhode Island, 09/2016. Assistant Marine Research Scientist , University of Rhode Island, 11/2013. Postdoctoral Investigator , Woods Hole Oceanographic Institution, 02/2011.
--------------------	--

Publications	& indicates Wei group advisees
---------------------	--------------------------------

Journal Publications (Peer-reviewed)

Parons, T., P. Wu&, **M. Wei**, S. DHondt (2023), The weight of New York City: Possible contributions to subsidence from anthropogenic sources. *Earth's Future*. DOI: 10.1029/2022EF003465.

He&, B., X. Wei, **M. Wei**, Y. Shen, M. Alvarez, S. Schwartz (2023), A shallow slow slip event in 2018 in the Semidi segment of the Alaska subduction zone detected by machine learning. *Earth and Planetary Science Letters*. DOI: 10.1016/j.epsl.2023.118154.

Slead&, S., & **M. Wei** (2022), Yield estimate for the January 2016 DPRK nuclear test based on InSAR and numerical modeling with mechanical heterogeneity, *Geophysical Journal International*, ggac308. <https://doi.org/10.1093/gji/ggac308>

Shi&, P., **M. Wei**, S. Barbot (2022), Contribution of Viscoelastic Stress to the Synchronization of Earthquake Cycles on Oceanic Transform Faults, *JGR Solid Earth*, e2022JB024069. <https://doi.org/10.1029/2022JB024069>

Wu&, P.-C., **M. Wei**, & S. D'Hondt (2022), Subsidence in coastal cities throughout the world observed by InSAR, *Geophysical Research Letters*, 49, e2022GL098477. <https://doi.org/10.1029/2022GL098477>

Shi&, P., **M. Wei**, R. Pockalny (2021), The ubiquitous creeping segments on oceanic transform faults, *Geology*, <https://doi.org/10.1130/G49562.1>.

- Cruz-Atienza, V. M., J. Tago, C. Villafuerte, **M. Wei**, et al. (2021), Short-Term Interaction between Silent and Devastating Earthquakes in Mexico, *Nature Communications*, <https://doi.org/10.1038/s41467-021-22326-6>.
- Watts, R., **M. Wei**, K. Donohue, K. Tracy, and B. He[&] (2021), Seafloor geodetic pressure measurements to detect shallow slow slip events: Methods to remove contributions from ocean water, *JGR Solid Earth*, accepted.
- Wei, M.** and P. Shi[&] (2021), Synchronization of earthquake cycles of adjacent segments on oceanic transform faults revealed by numerical simulation in the framework of rate-and-state friction, *JGR Solid Earth*, <https://doi.org/10.1029/2020JB020231>.
- He[&], B., **M. Wei**, R. Watts, and Y. Shen (2020), Detecting slow slip events from seafloor pressure data using machine learning, *Geophysical Research Letters*, V.47, doi: <https://doi.org/10.1029/2020GL087579>.
- Erickson, B. A., J. Jiang, M. Barall, et al., P. Shi[&], and **M. Wei** (2020), The community code verification exercise for simulating sequences of earthquakes and aseismic slip (SEAS), *Seismological Research Letters*, 91 (2A): 874–890, doi: <https://doi.org/10.1785/0220190248>.
- Wei, M.**, Y. Kaneko, P. Shi[&], and Y. Liu (2018), Numerical modeling of dynamically triggered shallow slow slip events in New Zealand by the 2016 Mw 7.8 Kaikoura earthquake, *Geophysical Research Letters*, 45, 4764–4772. <https://doi.org/10.1029/2018GL077879>.
- Li[&], H., **M. Wei**, D. Li, Y. Liu, Y. Kim, and S. Zhou (2018), Segmentation of slow slip events in south central Alaska possibly controlled by a subducted oceanic plateau, *JGR Solid Earth*, 123, <https://doi.org/10.1002/2017JB014911>.
- Wei, M.** (2017), Location and Source Characteristics of the January 6, 2016 North Korean Nuclear Test Constrained by InSAR, *Geophysical Journal International*, 209 (2), 762-769, doi: <https://doi.org/10.1093/gji/ggx053>.
- Yang, H., Y. Liu, **M. Wei**, J. Zhuang, and S. Zhou (2017), Induced earthquakes in the development of unconventional energy resources, *Science China Earth Sciences*, doi: 10.1007/s11430-017-9063-0.
- Fu, J., X. Wang, T. Wei, **M. Wei**, and Y. Shen (2017), A Cost-Effective Geodetic Strainmeter Based on Dual Coaxial Cable Bragg Gratings, *Sensors*, 17(4), 842; doi:10.3390/s17040842.
- Wei, M.**, Y. Liu, Y. Kaneko, J. McGuire, and R. Bilham (2015), Dynamic triggering of creep events in the Salton Trough, Southern California by regional $M \geq 5.4$ earthquakes constrained by geodetic observations and numerical simulations, *Earth and Planetary Science Letters*, 427, 1-10, doi:10.1016/j.epsl.2015.06.044.
- Wei, M.**, and J. McGuire (2014), The Mw 6.5 offshore Northern California earthquake of 10 January 2010: Ordinary stress drop on a high-strength fault, *Geophysical Research Letters*, 41, doi:10.1002/2014GL061043.

- Wei, M.**, Y. Kaneko, Y. Liu, and J. McGuire (2013), Episodic fault creep events in California controlled by shallow frictional heterogeneity, *Nature Geoscience* 6, 566–570, doi:10.1038/ngeo1835.
- Wei, M.**, J. McGuire, and E. Richardson (2012), A slow slip event in the south central Alaska Subduction Zone and related seismicity anomaly, *Geophys. Res. Lett.*, 39, L15309, doi:10.1029/2012GL052351.
- Wei, M.**, D. T. Sandwell, Y. Fialko, and R. Bilham (2011), Slip on faults in the Imperial Valley triggered by the 4 April 2010 Mw 7.2 El Mayor-Cucapah earthquake revealed by InSAR, *Geophysical Research Letters*, 38, L01308, doi:10.1029/2010GL045235.
- Wei, M.**, D. T. Sandwell, and B. Smith-Konter (2010), Optimal combination of InSAR and GPS for measuring interseismic crustal deformation, *Advances in Space Research*, 46, 2, 236-249, doi: 10.1016/j.asr.2010.03.013.
- Wei, M.** and D. T. Sandwell (2010), Decorrelation of ALOS and ERS interferometry over vegetated areas in California, *IEEE Trans. on Geoscience and Remote Sensing*, 48, 2942-2952, doi: 10.1109/TGRS.2010.2043442.
- Wei, M.**, D. Sandwell, and Y. Fialko (2009), A silent Mw 4.7 slip event of October 2006 on the Superstition Hills fault, southern California, *Journal of Geophysical Research*, 114, B07402, doi:10.1029/2008JB006135.
- Wei, M.** and D. T. Sandwell (2006), Estimates of Ridge-Axis Heat Flow from Depth and Age Data, *Tectonophysics*, 417, 325-335.

Book Chapter (Peer-reviewed)

- Wei, M.** (2018), Seismic Behavior on Oceanic Transform Faults at the East Pacific Rise, Book Chapter in “Transform Plate Boundaries and Fracture Zones”, edited by Dr. João C. Duarte. Publisher *Elsevier*.

Other publications

- Wei, M.** and D. T. Sandwell (2011), The Mw 7.2 El Mayor-Cucapah Earthquake in Baja California: Extensive Liquefaction Identified in ALOS InSAR Data, *Alaska SAR Facility Newsletter*.
- Sandwell, D., R. Mellors, X. Tong, **M. Wei**, and P. Wessel (2011), Open Radar Interferometry Software for Mapping Surface Deformation, *Eos Trans. AGU*, 92(28), doi:10.1029/2011EO280002.
- Sandwell, D., R. Mellors, X. Tong, **M. Wei**, and P. Wessel (2011), GMTSAR: An InSAR Processing System based on Generic Mapping Tools, *Scripps Institution of Oceanography Technical Report*.

Teaching

Undergraduate

Spring 2018–2023 Living by the ocean (OCG108G)

- Sole teaching
- Introduction of ocean science to all majors

- Class size: ~100 undergraduate students each year

Fall 2016 Environment Geology (GEO100), sole teaching

- Sole teaching
- Introduction of Environmental Geology to all majors
- Class size: 92 students

Spring 2015 Environment Geology (GEO100) and Natural Disasters (GEO113)

- Sole teaching
- Developed new course materials and provided flipped classroom experiences to enhance student learning
- Class size: GEO100 (2 sessions, ~180 total); GEO113 (1 session, ~90)

Graduate

Spring 2020 Geological oceanography (OCG440/540)

- Co-teach with Professor Rebecca Robinson
- Class size: 18 graduate and 5 undergraduate students

Spring 2019 Subduction zones (OCG643)

- Co-teach with Professor Chris Kincaid and Katie Kelley
- Class size: 6 graduate students

Fall 2017 Special topics on Earthquake and Fault zones (OCG593)

- Co-teach with Professor Yang Shen
- Class size: 3 graduate students

Outside URI, domestic

Summer 2016/2018–2021 Short course on GMTSAR at UCSD

- Co-teach with several other instructors
- Class size: ~20 graduate students from around the country

International

July 2015/2016 International summer short course on earthquake physics, Peking University, Beijing, China

- Gave lectures on surface deformation related to earthquakes and provide hands-on training for forward and inverse modeling of geodetic data
- Class size: ~100 graduate students

Course created

- Spring 2017 Living by the ocean (OCG108G)
- General education and Grand Challenge course
 - Became one of the most popular classes offered by GSO with 4 sections taught by different instructors and over 350 undergraduate students each year

Mentoring

Postdoc

9/2016 – 11/2017 Samuel Bell

PhD student

1/2022 – present Lingchao He
7/2019 – present Sandra Slead
9/2019 – present PeiChin Wu
9/2017 – 5/2022 Pengcheng Shi
9/2017 – 8/2022 Bing He

Undergraduate student

7/2021 – present Molida Chen, Rhode Island College
Summer 2019 Benjamin Watzak, SURFO from Texas A&M
6/2018 – 2/2020 Madeline Fasca, URI Geosciences
Summer 2018 Whitney Wallace, SURFO from Penn State
Summer 2017 Melanie Wallace, SURFO from Purdue University
Spring 2017 Harrison Leggio, URI computer science
Summer 2016 Whitney Schultz, SURFO from Colorado School of Mines
Summer 2015 Blake Cross, SURFO from Colorado School of Mines
Fall 2014 Travis Winter, URI Geosciences

Visiting PhD student

3/2019 – 2/2020 Yiming Luo, South China Sea Institute of Oceanology, China.
8/2018 – 2/2019 Bei Xu, University of Wuhan, China.
2/2015 – 9/2015 Haotian Li, Peking University of China

Committee member

9/2018 – present Loes van Dam, PhD, GSO
9/2019 – present Xiaozhuo Wei, PhD, GSO