

# Wenyuan Fan

Woods Hole Oceanographic Institution  
266 Woods Hole Rd., MS# 24  
Woods Hole, MA 02543-1050  
wfan@whoi.edu, +1 508-289-2954  
<https://wenyuanfan.github.io/>

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July 27, 2018

- EDUCATION** University of California, San Diego, **Ph.D.** (Geophysics) 2017  
Dissertation: Kinematic earthquake source imaging: theory and applications  
Advisor: Peter Shearer
- Peking University, **M.S.** (Geophysics) 2011  
Thesis: Crust and upper mantle velocity structure of the eastern Tibetan plateau and adjacent regions from ambient noise tomography
- Peking University, **B.S.** 2008
- RESEARCH POSITIONS** Weston Howland Jr. Postdoctoral Scholar 09/2017–now  
Woods Hole Oceanographic Institution, Woods Hole, MA 02543  
Mentor: Jeff McGuire
- RESEARCH INTERESTS** Array seismology  
Earthquake source kinematic and dynamic processes  
Earthquake interaction and triggering  
Waveform modeling
- AWARDS** James Postdoctoral Scholar Funds for Research 2018  
2017 China Scholarship Council Award 2018  
Woods Hole Oceanographic Institution Postdoctoral Scholarship 2017  
Lamont-Doherty Earth Observatory Postdoctoral Fellowship (declined) 2017  
AGU Outstanding Student Paper Award (2016) 2017  
Founder Scholarship, Peking University 2010  
Second Prize, Graduate Student Fellowship, Peking University 2010  
First Prize, Graduate Student Fellowship, Peking University 2008-2009  
Undergraduate Research Fellowship, Peking University 2007  
Second Prize, Geophysical Scholarship of Chinese Academy of Sciences 2006-2007
- PUBLICATIONS** Current h-index: 9 (Web of Science), 10 (Google Scholar). Total 317 citations, with average 19.81 citations per article (Science Citation Index as of 07/26/2018).
20. **Fan, W.** C. de Groot-Hedlin, M. A.H. Hedlin, and Z. Ma, Using surface waves recorded by a large mesh of three-element arrays to detect and locate disparate seismic sources, *Geophys. J. Int.*, in press, 2018.
19. **Fan, W.** and J. J. McGuire, Investigating microearthquake finite source attributes with IRIS Community Wavefield Demonstration Experiment in Oklahoma, *Geophys. J. Int.*, doi: 10.1093/gji/ggy203, 2018.

18. **Fan, W.** and P. M. Shearer, Coherent seismic arrivals in the P-wave coda of the 2012 Mw 7.2 Sumatra earthquake: water reverberations or an early after-shock?, *J. Geophys. Res.*, 123, doi: 10.1002/2018JB015573, 2018.
17. **Fan, W.**, D. Bassett, J. Jiang, P. M. Shearer, and C. Ji, Rupture evolution of the 2006 Java tsunami earthquake and the possible role of splay faults, *Tectonophysics*, doi: 10.1016/j.tecto.2017.10.003, 2017.
16. **Fan, W.** and P. M. Shearer, Investigation of back-projection uncertainties with M6 earthquakes, *J. Geophys. Res.*, 122, doi: 10.1002/2017JB014495, 2017.
15. **Fan, W.** and P. M. Shearer, Local near instantaneously dynamically triggered aftershocks of large earthquakes, *Science*, 353, 1133-1136, doi: 10.1126/science.aag0013, 2016.
14. **Fan, W.**, P. M. Shearer, C. Ji, and D. Bassett, Multiple branching rupture of the 2009 Tonga-Samoa earthquake, *J. Geophys. Res.* 121, doi:10.1002/2016JB012945, 2016.
13. Mai, P. M., D. Schorlemmer, M. Page, J.-P. Ampuero, K. Asano, M. Causse, S. Custodio, **W. Fan**, G. Festa, M. Galis, et al., The earthquake-source inversion validation (SIV) project, *Seismol. Res. Lett.* 87(3), doi:10.1785/0220150231, 2016.
12. **Fan, W.** and P. M. Shearer, Fault interactions and triggering during the 10 January 2012 Mw 7.2 Sumatra earthquake, *Geophys. Res. Lett.*, 43, 1934–1942, doi:10.1002/2016GL067785, 2016.
11. Melgar, D., **W. Fan**, S. Riquelme, J. Geng, C. Liang, M. Fuentes, G. Vargas, R. M. Allen, P. M. Shearer, E. J. Fielding, Slip segmentation and slow rupture to the trench during the 2015, Mw8.3 Illapel, Chile earthquake, *Geophys. Res. Lett.*, 43, 961–966, doi:10.1002/2015GL067369, 2016.
10. Denolle, M. A., **W. Fan**, and P. M. Shearer, Dynamics of the 2015 M7.8 Nepal earthquake, *Geophys. Res. Lett.*, 42, 7467–7475, doi:10.1002/2015GL065336, 2015.
9. **Fan, W.** and P. M. Shearer, Detailed rupture imaging of the 25 April 2015 Nepal earthquake using teleseismic P waves, *Geophys. Res. Lett.*, 42, 7467–7475, doi:10.1002/2015GL064587, 2015.
8. **Fan, W.**, Y. Chen, Y. Tang, Sn Zhou, Y. Feng, H. Yue, H. Wang, G. Jin, S. Wei, Y. Wang, Z. Gai, and J. Ning, Crust and upper mantle velocity structure of the eastern Tibetan plateau and adjacent regions from ambient noise tomography, *Chinese J. Geophys.* (in Chinese), 58(5), 1568-1583, doi:10.6038/cjg20150510, 2015.
7. **Fan, W.**, P. M. Shearer, and P. Gerstoft, Kinematic earthquake rupture inversion in the frequency domain, *Geophys. J. Int.* 199, 1138–1160, doi:10.1093/gji/

ggu319, 2014.

6. Yue, H., Y. Chen, E. Sandvol, J. Ni, T. Hearn, S. Zhou, Y. Feng, Z. Ge, A. Trujillo, Y. Wang, G. Jin, M. Jiang, Y. Tang, X. Liang, S. Wei, H. Wang, **W. Fan**, and Z. Liu, Lithospheric and upper mantle structure of the northeastern Tibetan Plateau, *J. Geophys. Res.*, 117, B05307, doi:10.1029/2011JB008545, 2012.
5. Tang, Y., Y. Chen, H. Wang, S. Zhou, J. Ning, Y. Yang, Z. Ding, R. Liu, Y. Feng, P. Li, C. Yu, S. Wei, and **W. Fan**, Ambient noise tomography in north China craton, *Chinese J. Geophys.*, (in Chinese), 54(8), 2011–2022, doi:10.3969/j.issn.0001-5733.2011.08.008, 2011.
4. Tang, X., **W. Fan**, Y. Feng., Y. Tang., Y. J. Chen, and L. Zhu, Phase velocity tomography of Rayleigh wave in Xinjiang from ambient noise, *Chinese J. Geophys.* (in Chinese), 54(8), 2042–2049, doi:10.3969/j.issn.0001-5733.2011.08.011, 2011.
3. Jiang, M., S. Zhou, E. Sandvol, X. Chen, X. Liang, Y. Chen, and **W. Fan**, 3-D lithospheric structure beneath southern Tibet from Rayleigh-wave tomography with a 2-D seismic array, *Geophys. J. Int.* 185, 593–608, doi:10.1111/j.1365-246X.2011.04979.x, 2011.
2. Wei, S., Y. Chen, E. Sandvol, S. Zhou, H. Yue, G. Jin, T. Hearn, M. Jiang, H. Wang, **W. Fan**, Z. Liu, Z. Ge, Y. Wang, Y. Feng, and J. Ni, Regional earthquakes in northern Tibetan Plateau: Implications for lithospheric strength in Tibet, *Geophys. Res. Lett.*, 37, L19307, doi:10.1029/2010GL044800, 2010.
1. Tang, Y., Y. Feng, Y. Chen, S. Zhou, J. Ning, S. Wei, P. Li, C. Yu, and **W. Fan**, Receiver function analysis at Shanxi Rift, *Chinese J. Geophys.*, (in Chinese) 53(9), 2102–2109, doi:10.3969/j.issn.0001-5733.2010.09.010, 2010.

## SUBMITTED & REVISION

- Ten Brink, U., Y. Wei, **W. Fan**., N. Miller, and J. Granja-Bruña, Tsunami generated by dynamically-triggered early aftershock of the 2010 Haiti earthquake, in revision, 2017.

## INVITED TALKS

2018 IRIS Workshop, Albuquerque, NM, USA	2018
University of Miami, Miami, FL, USA	2018
WHOI, Woods Hole, MA, USA	2018
Florida State University, Tallahassee, FL, USA	2018
T047, 2017 AGU, New Orleans, USA	2017
MIT, Boston, MA, USA	2017
Stony Brook University, Stony Brook, NY, USA	2017
UC Santa Cruz, Santa Cruz, CA, USA	2017
Caltech, Pasadena, CA, USA	2016
Harvard University, Cambridge, MA, USA	2016
Brown University, Providence, RI, USA	2016
LDEO, Columbia University, Palisades, NY, USA	2016
Earthquake Science Summer School, Lake Yamanakako, Japan	2015

<b>FUNDING</b>	NSF Funds: Collaborative Research: Capturing 4D Variations in Stress, Slip, and Fault-Zone Material Properties: The 2019-2021 Gofar Transform Fault Earthquake Prediction Experiment (Co-PI) 2018
	Student Funds: CIDER Summer Program 2017 SSA Annual Meeting Travel Grants 2017 SCEC-ERI Summer School Travel Award 2014–2016 SIO Department Graduate Student Excellence Travel/Research Award 2015–2016 NMEM2015 Travel Award 2015 USArray Short Course Travel Award 2013,2017 CIG/QUEST/IRIS Joint Workshop Travel Award 2013
<b>TEACHING EXPERIENCE</b>	Guest lecturer, Graduate, Seismic interferometry, SDSU 2015
	TA, Undergraduate, Seismological Experiment Practice Course, PKU 2010
	TA, Undergraduate, Introduction to Earthquakes, PKU 2010
	TA, Undergraduate, Methods of Mathematical Physics, PKU 2009
<b>AFFILIATIONS</b>	American Geophysical Union (AGU)
	Seismological Society of America (SSA)
	Southern California Earthquake Center (SCEC)
<b>SERVICE</b>	Journal Referee: Geophysical Research Letters, Geophysical Journal International, Bulletin of the Seismological Society of America, Journal of Geophysical Research: Solid Earth, Tectonophysics, Pure and Applied Geophysics
	Meeting Activities: 2018 AGU, Convener of S006 and T044:
	<ul style="list-style-type: none"> <li>• Earthquake Source Physics: Unified perspectives from Kinematic Source Imaging, Physics-based Modeling, Laboratory Experiments, and Earthquake Geology</li> <li>• Synthesis: Knowns and Unknowns of the Cascadia Subduction Zone</li> </ul>
	2017 AGU, Primary Convener of S43E and S51A:
	<ul style="list-style-type: none"> <li>• Earthquake Rupture Revealed by Kinematic Source Imaging</li> </ul>
	SSA 2017, Session Conveners:
	<ul style="list-style-type: none"> <li>• Earthquake Complexities Revealed by Kinematic and Dynamic Modeling and Multiple Geophysical Data Sets</li> <li>• Earthquake Interaction and Triggering: From Near Field to Far Field, From Natural to Induced</li> </ul>
	Community Involvements: Organization Committee, Queer Engineers, Scientists, and Technical Professionals (QuEST) at U.C. San Diego

<b>FIELD</b>	North China craton array project, 35 days in total.
<b>EXPERIENCE</b>	Necessarray project, 16 days in total.
	INDEPTH IV project,15 days in total.