Wenyuan Fan

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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

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 Oklahoma Wavefield Experiment nodal array, *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 aftershock?, *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

FUNDING

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

TEACHING EXPERIENCE

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

AFFILIATIONS

American Geophysical Union (AGU)
Seismological Society of America (SSA)
Southern California Earthquake Center (SCEC)

SERVICE

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:

- Earthquake Source Physics: Unified perspectives from Kinematic Source Imaging, Physics-based Modeling, Laboratory Experiments, and Earthquake Geology
- Synthesis: Knowns and Unknowns of the Cascadia Subduction Zone

2017 AGU, Primary Convener of S43E and S51A:

- Earthquake Rupture Revealed by Kinematic Source Imaging

SSA 2017, Session Conveners:

- Earthquake Complexities Revealed by Kinematic and Dynamic Modeling and Multiple Geophysical Data Sets
- Earthquake Interaction and Triggering: From Near Field to Far Field, From Natural to Induced

Community Involvements: Organization Committee, Queer Engineers, Scientists, and Technical Professionals (QuEST) at U.C. San Diego

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