Wenyuan Fan

Curriculum Vitae

Institute of Geophysics and Planetary Physics
Scripps Institution of Oceanography, UC San Diego
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EDUCATION

2011–2017 (expected), Ph.D. in Geophysics
University of California, San Diego, La Jolla, CA
Advisor: Peter Shearer
Dissertation title (expected): Kinematic earthquake source imaging: theories and applications

2008–2011, M.S. in Geophysics
Peking University, Beijing, China
Advisor: John Yongshun Chen
Thesis title: Crust and upper mantle velocity structure of the eastern Tibetan plateau and adjacent regions from ambient noise tomography

2004–2008, Bachelor of Science
Peking University, Beijing, China

RESEARCH POSITIONS

09/11–present, Research Assistant, IGPP/SIO, UC San Diego
09/08–07/11, Research Assistant, Department of Geophysics, Peking University

RESEARCH INTERESTS

Kinematic source imaging: imaging moderate to large earthquake rupture propagation. Finite-fault source inversion, back-projection, and compressive sensing.

Complex fault system interactions: understanding fault interactions and triggering between multiple fault systems.

Earthquake physics: understanding physical driving forces, dynamics, and modulating factors of large earthquakes.

Seismic waveform modeling: multiple moment tensor inversion, ambient noise, and surface wave tomography.

Data mining and earthquake detection: earthquake detection with large datasets.

PUBLICATIONS

Current h-index: 7 (Web of Science), 9 (Google Scholar). Total 178 citations, with average 12.71 citations per article (Science Citation Index as of 03/14/2017).

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.

FUNDING

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
CIG/QUEST/IRIS Joint Workshop Travel Award	2013

AWARDS

Woods Hole Oceanographic Institution Postdoctoral Scholar	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

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

INVITED TALKS

2017 Stony Brook University, Stony Brook, NY, USA
2017 IGPP seminar, UC Santa Cruz, Santa Cruz, CA, USA
2016 Seismo Lab Seminar, Caltech, Pasadena, CA, USA
2016 Solid Earth seminar, Harvard University, Cambridge, MA, USA
2016 Brown geophysics seminar, Brown University, Providence, RI, USA
2016 Weekly seismology/geophysics seminar, Lamont, Columbia University, Palisades, NY, USA
2015 The 3^{rd} international summer school on Earthquake Science, Lake Yamanakako, Japan

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

Meeting Activities

SSA 2017, Session Chair, "Earthquake Complexities Revealed by Kinematic and Dynamic Modeling and Multiple Geophysical Data Sets"
SSA 2017, Session Chair, "Earthquake Interaction and Triggering: From Near Field to Far Field, From Natural to Induced"

Community Involvement

Organization Committee, Queer Engineers, Scientists, and Technical Professionals (QuEST)

FIELD EXPERIENCE

North China craton array project, Shaanxi Province, China. Installation of twelve stations, five times of servicing, 35 days in total.

Necessarray project, Northeast of China. Installation of twenty stations, 16 days in total.

INDEPTH IV project, Qinhai Province, China. One time of servicing, 15 days in total.