

## Yingjie Yang

ARC Centre of Excellence for Core to Crust Fluid Systems

And GEMOC ARC National Key Centre

Dept. Earth and Planetary Sciences

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### Education

Ph.D. Geophysics, Brown University 2005

M.S. Geophysics, Brown University 2003

B.S. Geophysics, University of Science and Technology of China 2000

### Employment

2015-present Associate Professor/ ARC Future Fellow

2014-2015 ARC Future Fellow/Senior Lecturer, Macquarie University

2010-2013 Lecturer, ARC CCFS and GEMOC ARC National Key Centre, Department of Earth and Planetary Sciences, Macquarie University.

2005-2010 Senior Research Associate/Research Associate, Department of Physics, University of Colorado at Boulder.

2000-2005 Research Assistant, Department of Geological Sciences, Brown University

### Research interests:

Dynamics and deformation of Earth's lithosphere and mantle, Ambient noise surface wave tomography, Teleseismic surface wave tomography, Numerical modeling of surface wave propagation in 3-D heterogeneous medium.

### Honors & Awards

2015 The Anton Hales Medal from Australian Academy of Science

2014 Outstanding Reviewer for Geophysical Journal of International.

2013 Australian Research Council, Future Fellowship

2010 Outstanding Reviewer for Geophysical Journal of International.

2000 Award of Excellent Bachelor Thesis, USTC

2000 Graduate with Honor of USTC (B.S.), USTC

### Teaching activities

#### Undergraduate courses:

GEOS112: The Planet Earth. Practicals.

GEOS126: Marine Geoscience. Practicals.

GEOS205 - Introduction to Geophysics, practicals and fieldwork

GEOS272 - Geology of Australia - Global Perspectives, lectures and practicals

GEOS305: Environmental and Groundwater Geophysics, fieldtrip

GEOS306: Exploration Geophysics, Lectures, practicals and fieldtrip.

GEOS385: Global Tectonics, Convener, several lectures and practicals.

**Postgraduate courses:**

GEOS702-Geophysics: Special Topics 2, some lectures.

GEOS891 Research project: This unit comprises a substantial research project on a chosen topic. Students will collect and analyze their own data and will compare their findings to literature results on this topic. The results are to be presented in the form of a manuscript prepared for publication.

**Current Graduate Students/Researchers**

Farshad Salajegheh	PhD student, associate supervisor	2014-present
Shucheng Wu	PhD student	2015-present
Guoliang Li	PhD student	2017-present
Anqi Zhang	PhD student, associate supervisor	2018-present

**Former Graduate students/Researchers**

Kai Wang	PhD student (now postdoc at University of Toronto)	2015-2018
Chengxin Jiang	PhD student (now postdoc at Harvard University)	2012-2016
Mehdi Tork Qashqai	PhD student (now postdoc at CSIRO)	2012-2017
Jun Xie	PhD student (now postdoc at Institute of Geodesy of Geophysics, CAS)	2013-2016
Bin Shan	Research Associate/postdoc (now Professor at China University of Geosciences (Wuhan))	2013-2015
Guo Zhen	Research Associate/postdoc (now Assistant Professor at the Southern University of Science and Technology)	2013-2016
Ping Ji	Visiting Scholar	2014-2015

## Refereed journal Publications

(\* denotes student/postdoc advisees,

Citations: 5700 and *h*-index: 34 Google scholar; 4400 and *h*-index: 32 from Scopus in April 2020.)

76. Xie, J\*, **Yang, Y.** and Luo, Y. 2020. Improving cross-correlations of ambient noise using a RMS-ratio selection stacking method. *Geophysical Journal International*.
75. Luo, Yinhe; **Yang, Yingjie**; Xie, Jinyun; Yang, Xiaozhou; Ren, Fengru; Zhao, Kaifeng; Xu, Hongrui; Evaluating Uncertainties of Phase Velocity Measurements from Cross-Correlations of Ambient Seismic Noise *Seismological Research Letters* 2020.
74. Xu, YX; Yang, B; Zhang, AQ; Wu, SC; Zhu, L; **Yang, YJ**; Wang, QY; Xia, QK; Magnetotelluric imaging of a fossil oceanic plate in northwestern Xinjiang, China *Geology* 2020
73. Wang, K\*; Q., Liu; **Y. Yang**; 3D Sensitivity Kernels for Multi - component Empirical Green's Functions from Ambient Noise: Methodology and Application to Adjoint Tomography *Journal of Geophysical Research: Solid Earth* 2019
72. Li, G.\*; F. Niu; **Y. Yang**; K. Tao; Joint inversion of Rayleigh wave phase velocity, particle motion and teleseismic body wave data for sedimentary structures *Geophysical Research Letters* 2019
71. O'Donnell, JP; Stuart, GW; Brisbourne, AM; Selway, K; **Yang, Y**; Nield, GA; Whitehouse, PL; Nyblade, AA; Wiens, DA; Aster, RC; The uppermost mantle seismic velocity structure of West Antarctica from Rayleigh wave tomography: Insights into tectonic structure and geothermal heat flow *Earth and Planetary Science Letters* 522 219-233 2019.
70. Zhang, Anqi\*; Afonso, Juan Carlos; Xu, Yixian; Wu, Shucheng; **Yang, Yingjie**; Yang, Bo; The deep lithospheric structure of the Junggar terrane, NW China: Implications for its origin and tectonic evolution *Journal of Geophysical Research: Solid Earth* 2019
69. O'Donnell, JP; Brisbourne, AM; Stuart, GW; Dunham, CK; **Yang, Y**; Nield, GA; Whitehouse, PL; Nyblade, AA; Wiens, DA; Anadakrishnan, S; Mapping crustal shear wave velocity structure and radial anisotropy beneath West Antarctica using seismic ambient noise *Geochemistry, Geophysics, Geosystems* 2019.
68. Guo, Z.\*; Wang, K.\*; **Yang, Y.**, Tang, Y., John Chen, Y., & Hung, S. H. (2018). The origin and mantle dynamics of quaternary intraplate volcanism in Northeast China from joint inversion of surface wave and body wave. *Journal of Geophysical Research: Solid Earth*, 123(3), 2410-2425.
67. Luo, Y., Lin, J., **Yang, Y.**, Wang, L., Yang, X., & Xie, J. (2018). Joint Inversion of Active Sources and Ambient Noise for Near-Surface Structures: A Case Study in the Balikun Basin, China. *Seismological Research Letters*.
66. Xie, J., R. Chu, and **Y. Yang** (2018). 3-D Upper-Mantle Shear Velocity Model Beneath the Contiguous United States Based on Broadband Surface Wave from Ambient Seismic Noise." *Pure and Applied Geophysics* 175.10: 3403-3418.
65. Wang, K.\*; **Yang, Y.**, Basini, P., Tong, P., Tape, C., & Liu, Q. (2018). Refined crustal and uppermost mantle structure of southern California by ambient noise adjoint tomography. *Geophysical Journal International*, 215(2), 844-863.
64. Li, S., Guo, Z., Chen, Y. J., **Yang, Y.**, & Huang, Q. (2018). Lithospheric structure of the Northern Ordos from ambient noise and teleseismic surface wave tomography. *Journal of Geophysical Research: Solid Earth*, 123(8), 6940-6957.

63. Tork Qashqai, Mehdi, Juan Carlos Afonso, and **Yingjie Yang**. Physical State and Structure of the Crust Beneath the Western-Central United States From Multiobservable Probabilistic Inversion." *Tectonics* 37.9 (2018): 3117-3147.
62. Wu, S\*, Huang, R., Xu, Y., **Yang, Y.**, Jiang, X., & Zhu, L. (2018). Seismological evidence for a remnant oceanic slab in the western Junggar, Northwest China. *Journal of Geophysical Research: Solid Earth*.
61. Li, G.\*, Niu, F., **Yang, Y.**, & Xie, J., An investigation of time–frequency domain phase-weighted stacking and its application to phase-velocity extraction from ambient noise's empirical Green's functions. *Geophysical Journal International*, 212(2), 1143-1156, 2017.
60. Guo, Z.\*, Y. **Yang, Y.J.** Chen, Crustal radial anisotropy in Northeast China and its implications for the regional tectonic extension, *Geophysical Journal International*, Volume, 207, 197-208, 2016.
59. Tork Qashqai, M.\*, JC Afonso, **Y Yang**, The crustal structure of the Arizona Transition Zone and southern Colorado Plateau from multiobservable probabilistic inversion, *Geochemistry, Geophysics, Geosystems*, DOI: 10.1002/2016GC006463, 2016
58. Afonso, JC, N Rawlinson, **Y Yang**, et al., 3 - D multiobservable probabilistic inversion for the compositional and thermal structure of the lithosphere and upper mantle III: Thermochemical Tomography in the Western - Central US, *Journal of Geophysical Research: Solid Earth*, DOI: 10.1002/2016JB013049, 2016.
57. Guo, Z. \*, JC Afonso, MT Qashqai, **Y Yang**, YJ Chen, Thermochemical structure of the North China Craton from multi-observable probabilistic inversion: Extent and causes of cratonic lithosphere modification, *Gondwana Research* 37, 252-265, 2016.
56. Jiang, C\*, **Y., Yang**, N. Rawlinson, WL Griffin, Crustal structure of the Newer Volcanics Province, SE Australia, from ambient noise tomography, *Tectonophysics* doi: 10.1016/j.tecto.2016.06, 2016.
55. Jiang, C\*, **Y Yang**, Y Zheng, Crustal structure in the junction of Qinling Orogen, Yangtze Craton and Tibetan Plateau: implications for the formation of the Dabashan Orocline and the growth of Tibetan Plateau, *Geophysical Journal International* 205 (3), 1670-1681, 2016.
54. Xing, G, F Niu, M Chen, **Y Yang**, Effects of shallow density structure on the inversion for crustal shear wave speeds in surface wave tomography, *Geophysical Journal International* 205 (2), 1144-1152, 2016.
53. Wang, K\*, Y Luo, **Y Yang**, Correction of phase velocity bias caused by strong directional noise sources in high-frequency ambient noise tomography: a case study in Karamay, China, *Geophysical Journal International* 205 (2), 715-727, 2016.
52. Xie, J\*, **Y. Yang**, S. Ni, On the accuracy of long-period Rayleigh waves extracted from ambient noise, *Geophys. J. Int* 206(1): 48-55. doi: 10.1093/gji/ggw137, 2016.
51. Xu, Y., S. Zhang, W. L. Griffin, **Y. Yang**, B. Yang, Y. Luo, L. Zhu, J. C. Afonso, and B. Lei, How did the Dabie Orogen collapse? Insights from 3-D magnetotelluric imaging of profile data, *J. Geophys. Res. Solid Earth*, 121, doi:10.1002/2015JB012717, 2016.
50. Li, G, H Chen, F Niu, Z Guo, **Y Yang**, J Xie, Measurement of Rayleigh wave ellipticity and its application to the joint inversion of high-resolution S-wave velocity structure beneath northeast China, *Journal of Geophysical Research: Solid Earth*, DOI: 10.1002/2015JB012459, 11 January 2016.

49. Guo, Z\*, YJ Chen, J Ning, **Y Yang**, JC Afonso, Y Tang, Seismic evidence of on-going sublithosphere upper mantle convection for intra-plate volcanism in Northeast China, *Earth and Planetary Science Letters* 433, 31-43,2016.
48. Rawlinson, N, S Pilia, M Young, M Salmon, **Y Yang**, Crust and upper mantle structure beneath southeast Australia from ambient noise and teleseismic tomography, doi:10.1016/j.tecto.2015.11.034, *Tectonophysics*,2015.
47. Luo, L,**Y Yang**, K Zhao, Y Xu, J Xia, Unraveling overtone interferences in Love-wave phase velocity measurements by radon transform, *Geophysical Journal International* 203 (1), 327-333,2015.
46. Luo Y, **Y. Yang**, Y. Xu, H. Xu, K. Zhao and K. Wang (2015), On the limitations of interstation distances in ambient noise tomography, *Geophys. J. Int.* 201, 652–661
45. Li,X, L. Ouyang, H. Li, **Y. Yang**, D. Zheng, Q. Lü, M. Zhou, J. Tan, S. Sun, and G.Zhang (2015). A Broadband Seismic Network in the Middle–Lower Yangtze Metallogenic Belt, China. *Seismological Research Letters*, May/June 2015.
44. Jiang, C. \*, **Yang, Y**, and Zheng, Y. 2014. Penetration of mid-crustal low velocity zone across the Kunlun Fault in the NE Tibetan Plateau revealed by ambient noise tomography, *Earth and Planetary Science* 406, 81-92.
43. **Yang, Y.**, Application of teleseismic long-period surface waves from ambient noise in regional surface wave tomography: a case study in western USA, *Geophysical Journal International* 198 (3), 1644-1652, 2014.
42. Ouyang, L., H. Li, Q. Lu, **Y. Yang**, X. Li, G. Jiang, G. Zhang, D. Shi, D. Zheng, S. Sun, J. Tan and M. Zhou, 2014. Crustal and uppermost mantle velocity structure and its relationship with the formation of ore districts in the Middle–Lower Yangtze River region, *Earth and Planetary Science Letters*, 408, 378–389.
41. Shan, B. \*, J. C. Afonso, **Y. Yang**, C. J. Grose, Y. Zheng, X. Xiong, and L. Zhou (2014),The thermochemical structure of the lithosphere and upper mantle beneath south China: Results from multiobservable probabilistic inversion, *J. Geophys. Res. Solid Earth*, 119, 8417–8441,doi:10.1002/2014JB011412.
40. Xie, J., M.H. Ritzwoller, W. Shen, **Y. Yang**, Y. Zheng, and L. Zhou Crustal radial anisotropy across eastern Tibet and the western Yangtze craton, *J. Geophys. Res.*, DOI: 10.1002/jgrb.50296, 2013.
39. Zheng Y., C Ge, Z. Xie, **Y. Yang**, X. Xiong, H. Hsu, Crustal and upper mantle structure and the deep seismogenic environment in the source regions of the Lushan earthquake and the Wenchuan earthquake, *Science China Earth Sciences*, 56, Issue,1158-1168, 10.1007/s11430-013-4641-2,2013.
38. Warren, L. M., S. L. Beck, C. B. Biryol, G. Zandt, A. A. Ozacar, and **Y. Yang**, Crustal Velocity Structure of Central and Eastern Turkey from Ambient Noise Tomography, *Geophys. J. Int, Geophys. J. Int.*,194, 1941–1954,2013
37. Afonso, J.C., Fulla J., Griffin, W.L., **Yang, Y.**, Jones, A.G., Connolly, J.A.D., O'Reilly, S.Y., 3D multi-observable probabilistic inversion for the compositional and thermal structure of the lithosphere and upper mantle I: a priori information and geophysical observables, *J. Geophys. Res.*, doi:10.1002/jgrb.50124, 2013.

36. Afonso, J.C., Fullea J., **Yang, Y.**, Connolly, J.A.D., Jones, A.G., 3D multi-observable probabilistic inversion for the compositional and thermal structure of the lithosphere and upper mantle II: General methodology and resolution analysis. *J.Geophys. Res.*, doi:10.1002/jgrb.50123., 2013.
35. Luo, Y., Y. Xu, **Y. Yang**, Crustal radial anisotropy beneath the Dabie orogenic belt from ambient noise tomography, *Geophys. J. Int.*, 195, 1149-1164, doi: 10.1093/gji/ggt281, 2013.
34. Jiang, M., Y. Ai, L. Chen, **Y. Yang**, Local modification of the lithosphere beneath the central and western North China Craton: 3-D constraints from Rayleigh wave tomography, *Gondwana Research*, 24, 849-864, 2013.
33. Gilbert H., **Y. Yang**, D. Forsyth, C. Jones, T. Owens, G. Zandt, and J. Stachnik, Imaging lithospheric foundering in the structure of the Sierra Nevada, *Geosphere*, doi: 10.1130/GES00790.12012, 2012.
32. Zhou, L., J. Xie, Y. Zheng, W. Shen, **Y. Yang**, H. Shi, and M.H. Ritzwoller, The structure of the crust and uppermost mantle beneath South China from ambient noise and earthquake tomography, *Geophys. J. Int.*, 189, 1565-1583, 2012.
31. **Yang, Y.**, M.H. Ritzwoller, Y. Zheng, A.L. Levshin, and Z. Xie, A synoptic view of the distribution and connectivity of the mid-crustal low velocity zone beneath Tibet, *J.Geophys. Res.*, 117, B04303, doi:10.1029/2011JB008810, 2012
30. Luo, Y., Y. Xu, **Y. Yang**, Crustal structure beneath the Dabie orogenic belt from ambient noise tomography, *Earth and Planetary Science Letters* 313-314, 2012.
29. Zheng, Y., W. Shen, L. Zhou, **Y. Yang**, Z. Xie, and M.H. Ritzwoller, Crust and uppermost mantle beneath the North China Craton, northeastern China, and the Sea of Japan from ambient noise tomography, *J.Geophys. Res.*, 116, B12312, doi:10.1029/2011JB008637, 2011
28. Harmon, N., D. W. Forsyth, D. S. Weeraratne, **Y. Yang**, S. C. Webb , Mantle heterogeneity and off axis volcanism on young Pacific lithosphere, *Earth and Planetary Science Letters* 311 (2011) 306–
27. Tang, Y.C., Y.J. Chen, **Y. Yang**, et al., Ambient Noise Tomography in North China Craton, *Chinese J. Geophys*, 54, 2042-2049, 2011.
26. Zhang, Q., E. Sandvol, N. James, **Y. Yang**, Y. J. Chen, Rayleigh wave tomography of the northeastern margin of the Tibetan Plateau, *Earth and Planetary Science Letters*, doi:10.1016/j.epsl.2011.01.021, 2011
25. **Yang, Y.**, M.H. Ritzwoller, and C.H. Jones, Crustal structure determined from ambient noise tomography near the magmatic centers of the Coso region, southeastern California, *Geochem. Geophys. Geosyst.*, 12, Q02009, doi:10.1029/2010GC003362, 2011.
24. Barmin, M. P., Levshin, A. L., **Yang, Y.** and Ritzwoller, M. H., Epicentral location based on Rayleigh wave Empirical Green's Functions from ambient seismic noise. *Geophysical Journal International*, 184: 869–884. doi: 10.1111/j.1365-246X.2010.04879.x, 2011.
23. Lin, F.C., M.H. Ritzwoller, **Y. Yang**, M.P. Moschetti, and M.J. Fouch, Complex and variable crustal and uppermost mantle seismic anisotropy in the western United States, *Nature Geoscience*, 4, 55-61, doi:10.1038/ngeo1036, 2011.
22. **Yang, Y.**, W. Shen and M.H. Ritzwoller, surface wave tomography in a large-scale seismic array combining ambient noise and teleseismic earthquake data, *Earthquake Science*, 24, 55-64, 2011.
21. Sun, X., X. Song, S. Zheng, **Y. Yang**, M. Ritzwoller, Three dimensional shear velocity structure

- of crust and upper mantle in China from ambient noise surface wave tomography, *Earthquake Science*, Vol. 23, 449-463,2010.
20. Zheng, Y., **Y. Yang**, M.H. Ritzwoller, X. Zheng, X. Xiong, Z. Li, Crustal structure of the northeastern Tibetan Plateau, the Ordos Block and the Sichuan Basin from ambient noise tomography, *Earthquake Science*, Vol. 23, 465-476,2010.
  19. Moschetti, M.P., M.H. Ritzwoller, F.C. Lin, and **Y. Yang**, Crustal shear velocity structure of the western US inferred from ambient noise and earthquake data, *J. Geophys. Res.*, 115, B10306, doi:10.1029/2010JB007448,2010.
  18. **Yang, Y.**, et al., Rayleigh wave phase velocity maps in Tibet and the surrounding regions from ambient seismic noise tomography, *Geochem. Geophys. Geosyst.*, 11, Q08010, doi:10.1029/2010GC003119.
  17. Moschetti, M.P., M.H. Ritzwoller, F. Lin, and **Y. Yang**, Seismic evidence for widespread deep crustal deformation caused by extension in the western US, *Nature*, 464, Number 7290, 885-889, 8 April 2010.
  16. Bensen, G.D., M.H. Ritzwoller and **Y. Yang**, A 3D shear velocity model of the crust and uppermost mantle beneath the United States from ambient seismic noise, *GJI, Geophys. J. Int.*, 177, 1177-1196, 2009.
  15. **Yang Y.**, D. W. Forsyth, Attenuation in the upper mantle beneath Southern California: Physical state of the lithosphere and asthenosphere, *J. Geophys. Res.*, 113, B03308, doi:10.1029/2007JB005118,2008.
  14. **Yang, Y.** and M.H. Ritzwoller, The characteristics of ambient seismic noise as a source for surface wave tomography, *Geochem., Geophys., Geosyst.*, 9(2), Q02008, 18 pages, doi:10.1029/2007GC001814, 2008.
  13. **Yang, Y.**, and M. H. Ritzwoller, Teleseismic surface wave tomography in the western U.S. using the Transportable Array component of USArray, *Geophys. Res. Lett.*, 35, L04308, doi:10.1029/2007GL032278,2008.
  12. **Yang, Y.**, A. Li, M.H. Ritzwoller, Crustal and uppermost mantle structure in southern Africa revealed from ambient noise and teleseismic tomography, *Geophys. J. Int.* 174 (1) , 235-248 doi:10.1111/j.1365-246X.2008.03779.x,2008.
  11. Zheng, S., X. Sun, X. Song, **Y. Yang**, and M. H. Ritzwoller (2008), Surface wave tomography of China from ambient seismic noise correlation, *Geochem. Geophys. Geosyst.*, 9, Q0502, doi:10.1029/2008GC001981, 2008.
  10. **Yang, Y.**, M. H. Ritzwoller, F.-C. Lin, M. P. Moschetti, and N. M. Shapiro (2008), Structure of the crust and uppermost mantle beneath the western United States revealed by ambient noise and earthquake tomography, *J. Geophys. Res.*, 113, B12310, doi:10.1029/2008JB005833.
  9. Villasenor, A., **Y. Yang**, M.H. Ritzwoller, and J. Gallart, Ambient noise surface wave tomography of the Iberian Peninsula: Implications for shallow seismic structure, *Geophys. Res. Lett.*, 34, L11304, doi:10.1029/2007GL030164,2007.
  8. Bensen, G.D., M.H. Ritzwoller, M.P. Barmin, A.L. Levshin, F. Lin, M.P. Moschetti, N.M. Shapiro, and **Y. Yang**, Processing seismic ambient noise data to obtain reliable broad-band surface wave dispersion measurements, *Geophys. J. Int.*, 169, 1239-1260, 2007.

7. **Yang, Y.**, D.W. Forsyth, and D.S. Weeraratne, Seismic attenuation near the East Pacific Rise and the origin of the low-velocity zone, *Earth and Planetary Science Letters*, Volume 258, Issue 1-2, p. 260-268, 2007.
6. Weeraratne, D.S., D.W. Forsyth, **Y. Yang**, and S.C. Webb, Rayleigh wave tomography of the upper mantle beneath intraplate seamount chains in the south Pacific, *J. Geophys. Res.*, **112**, B06303, doi:10.1029/2006JB004403, 2007.
5. **Yang, Y.**, M.H. Ritzwoller, A.L. Levshin, and N.M. Shapiro, Ambient noise Rayleigh wave tomography across Europe, *Geophys. J. Int.*, 168(1), page 259, 2007.
4. **Yang, Y.**, and D.W. Forsyth, Rayleigh wave phase velocities, small-scale convection and azimuthal anisotropy beneath southern California, *J. Geophys. Res.*, 111, B07306, doi:10.1029/2005JB004180, 2006
3. **Yang, Y.**, and D.W. Forsyth, Regional tomographic inversion of amplitude and phase of Rayleigh waves with 2-D sensitivity kernels, *Geophys. J. Int.*, 166, 1148-1160., 2006.
2. Forsyth, D.W., and **Y. Yang**, M.-D Mangriotis, and Y. Shen, Coupled seismic slip on adjacent oceanic transfer faults, *Geophys. Res. Lett.*, 30(12), 1618, doi:10.1029/2002GL016454, 2003.
1. **Yang, Y.** and D.W. Forsyth, Improving epicentral and magnitude estimation of earthquakes from T phases by considering the excitation function, *Bull. Seism. Soc. Am.* 93,2106-2122,2003.

#### **Awarded research grants**

- Australian DP190102940 (2019-2021, CI: Y Yang and J.C. Afonso, awarded: AU\$370,000)  
Unveiling the fine structure of the Australian continent using ocean waves
- Australian Future Fellowship, 2014-2018, CI: Yingjie Yang, awarded: \$733,323 How the Earth moves: Developing a novel seismological approach to map the small-scale dynamics of the upper mantle
- Australian DP120102372 (2012-2014, CI: J.C. Afonso, Y. Yang and N. Rawlinson, awarded: AU\$285,000), What lies beneath: Unveiling the fine-scale 3D compositional and thermal structure of the subcontinental lithosphere and upper mantle
- Australian DP120103673 (2012-2014, CI: N Rawlinson and Y Yang, awarded: AU\$420,000)  
Down under Down Under: Using multi-scale seismic tomography to image beneath Australia's Great Artesian Basin
- 1/1/2010-12/31/2012 NSF-EAR- 0944022Crustal and Uppermost Mantle Anisotropy Beneath Tibet: New Constraints on Deformation Processes, Amount Awarded: \$ 284,088– 3 years, PI: Mike Ritzwoller/Yingjie Yang
- 6/4/2007-5/31/2010 NSF-EAR-0711526Ambient Noise and Teleseismic Tomography to infer the Physical State and Structure of the Crust and Upper Mantle in the Western United States, Amount Awarded: \$ 276,554– 3 years, PI: Mike Ritzwoller/Yingjie Yang

#### **Invited talks**

- AOGS 13th Annual Meeting, Towards joint tomography of broadband ambient noise data and teleseismic body waves, Beijing, China, 31 Jul to 5 Aug, 2016



- 25th International Geophysical conference and exhibition, 3D imaging of the Earth's lithosphere using noise from ocean waves, Adelaide, August 21-25, 2016.
- China University of Petroleum, Imaging lithosphere structures using ambient noise tomography, July, 2014.
- Beijing University, Imaging lithosphere structures using long period surface wave from ambient noise, June, 2013.
- 2013 Annual Meeting of Chinese Geophysical Society, Application of long period surface waves from ambient noise in regional surface wave tomography, Kunming, China, 13-16 2013.
- University of Sydney, Imaging Lithospheric Structure Using Ambient Noise Tomography, February, 2012.
- Australian National University, Progress in Ambient Noise Tomography: Applications in W. USA and the Tibetan Plateau, March, 2011
- 2011 AGU Fall meeting, Surface wave tomography on large-scale seismic arrays combining ambient noise and teleseismic earthquake data, December 5-9, San Francisco, 2011.
- Youth Symposium on Earthquake Forecast Technology organized by China Earthquake Networks Center, Progress in Ambient Noise Tomography: Applications in W. USA and the Tibetan Plateau, July, 2011.
- 2010 Western Pacific Geophysics Meeting, 3D shear velocity crustal structure across Tibet and surrounding regions from ambient noise tomography, June 2010.
- University of Toronto, Seismic Tomography without Earthquakes: Progress in Ambient Noise Tomography, April 2010.
- China University of Geosciences, Seismic Tomography without Earthquakes: Progress in Ambient Noise Tomography, April 2010.
- Massachusetts Institute of Technology, Unveiling the lithospheric structures in the western US from ambient noise and teleseismic tomography, October, 2009.
- University of Science and Technology of China (USTC), Seismic Tomography without Earthquakes: Progress in Ambient Noise Tomography, July, 2009.
- The Institute of Geodesy and Geophysics of China Academy of Sciences, Seismic Tomography without Earthquakes: Progress in Ambient Noise Tomography, July, 2009.
- 2009 AGU Joint Assembly, 24–27 May 2009, Toronto, Ontario, Canada, Ambient noise and earthquake tomography: the structure of the crust and uppermost mantle beneath the western US
- Baylor University, Ambient seismic noise and teleseismic tomography in the western USA: high-resolution 3-D images of the crust and upper mantle from Earthscope/USArray, March, 2009.
- 2008 AGU Fall meeting, Eikonal tomography for earthquake data: surface wave azimuthal anisotropy in the western US, San Francisco, December 15-19, 2008.
- IRIS workshop, Stevenson, WA. Ambient seismic noise and teleseismic tomography in the western USA: high-resolution 3-D images of the crust and upper mantle from Earthscope/USArray, June 4-6, 2008.
- 2007 AGU Fall Meeting, Ambient Noise Tomography in Western China and Northern India, December 10-14, 2007.

- University of Houston, Ambient Noise and Teleseismic Tomography to Infer the Physical State and Structure of the Crust and Upper Mantle in the Western US, September 21, 2007.
- 2007 Acoustic Society of America conference, Salt Lake City, Ambient noise tomography: High-resolution 3-D model of the crust and upper mantle from the Earthscope/USArray, June 3-5, 2007
- Stony Brook University, High-resolution surface wave tomography combining ambient noise and teleseismic events in the western US, April 9, 2007.
- Beijing University, Broad-Band Ambient Noise Tomography across Europe and North America, July 21, 2006.
- Princeton University, Tomographic inversion of amplitude and phase of Rayleigh waves with 2-D sensitivity kernels applied to southern California, March 11, 2005.
- Woods Hole Oceanographic Institution, Improving Epicentral and Magnitude Estimation of Earthquakes from T Phases by Considering the Excitation Function, August 4, 2004.

## **Professional Service**

- 2015-present, Macquarie University's representative for IRIS.
- 2014, Convener, AOGS 11th Annual Meeting, session "SE31 Seismic Imaging and Tomography of Multi-scale Earth Structure".
- 2012, Convener, 34<sup>th</sup> International Geological Congress, "Lithosphere structure from ambient noise and other seismology".
- 2009-2010, Member of IRIS Transportable Array Working Group
- 2009, Convener, AGU Fall meeting, "A Multidisciplinary Look at Volcanism in Continental and Oceanic Plate Interiors",
- 2007, Oral Session Chair, AGU FALL meeting, "Advances in Signal Processing Methods for Seismology".
- 2006, Poster Session Chair of session "Seismology General Contributions Posters", Joint Assembly of AGU 2006
- 2003-present, Peer reviewer for journals of JGR, GRL, EPSL, GJI, G-cube, BSSA, PEPI, Tectonophysics, Lithos, PAGES, Earthquake Science and for proposals of NSF and European Resuscitation Council