

CURRICULUM VITAE

Shengji Wei
Assistant Professor
Asian School of the Environment

Academic Qualifications

2009 PhD (Geophysics), University of Science and Technology of China
2004 BSc (Geophysics), University of Science and Technology of China

Professional Qualifications / Memberships

2012 - Present Member, Seismological Society of America
2008 - Present Member, American Geophysical Union

Summary of Working Experience

Oct 2014 - Present Assistant Professor, Asian School of Environment, NTU
Oct 2014 - Present Principle Investigator, Earth Observatory of Singapore, NTU
July 2009 - Oct 2014 Research Fellow, Seismological Laboratory, Caltech, USA

RESEARCH SUMMARY

Key Areas of Research

As a key member of tectonic group, my seismology and geophysics expertise provide quantitative observations and physical insights to a series of fundamental plate tectonic and earthquake topics. My research interests focus on earthquake source studies both in real time and later in-depth studies. I am also interested in velocity structures properties to better understand earthquake sources physics, tectonic and geodynamic processes. My research experiences cover both natural and man-made earthquakes. My approach for resolving the kinematic nature of earthquakes involves the combination of geodesy, geology and seismology to better constrain the spatial-temporal evolution of seismic rupture properties. Besides reconciling various datasets, I also developed techniques that allow waveform inversion/modelling to be extended to the higher frequency (>1Hz) range of relevance for damage assessment. In more details, my research is divided in the following sub-topics:

- Earthquake rupture process imaging
Understanding of the fundamental physics of earthquake initiation, propagation and termination, as well as better seismic hazard preparation heavily depend on how well we can image the kinematic rupture process of large earthquakes. The kinematic model describe the spatial and temporal extent of the rupture process. To provide the best constraints to the rupture model, we use multidisciplinary approaches that combine geodetic, tsunamic, seismological and geologic observations in a non-linear, highly efficient inversion scheme. PhD students Priya and Hongyu are working on this topic.
- Strong ground motion simulations
Strong ground shaking from earthquake poses great threats to buildings and infrastructures, to better quantify the impact from such threats and prepare adequately for

it, we conduct broadband ground shaking simulations for large earthquakes. We modify the kinematic rupture model obtain in finite fault inversion to enhance the high frequency content, and then combine low frequency synthetic waveform from deterministic simulations and high frequency waveform from a stochastic approach to generate broadband ground shakings.

- **Earthquake focal mechanism inversion**
The fault location, geometry, slipping direction, magnitude and duration of the rupture are fundamental physical parameters of earthquakes, precisely determine these parameters are critical not only for seismology but also for many other fields, such as tectonics. We use state-of-the-art broadband waveform inversion and modelling approaches to obtain high resolution earthquake source parameters. Our approaches can handle the most complicated structure models that are characterized by topography, sediment basins, water layer as well as spherical earth geometry. PhD student Wardah and Deepa, research associate Phylo, research fellow Weiwen are working on this topic.
- **Crustal to upper mantle scale velocity structure inversion**
Better constraints and understanding of the velocity structure of the earth at different scale is a fundamental topic in seismology. It carries the information of the dynamic history of the earth, natural resource and it is the host of the dynamic wavefields that are created by the earthquakes. We develop and adopt advanced numerical approaches to handle the complicated velocity, mainly aiming at better earthquake rupture imaging. Research fellow Weiwen and Karen are working on this topic.
- **Induced seismicity and rock mechanics**
In recent years, induced seismicity has increased dramatically due to the explosively increasing hydro-fracking activities in the oil and gas industrial. Magnitude of some induced earthquakes can be larger than 5 and produce damages to infrastructure and therefore poses a man-made threat to human society. We study the induced seismicity through the combination of rock experiment, seismology, geodesy, numerical simulations as well as field observations. With such comprehensive observations and methodology, we aim at imaging not only the coseismic rupture but also deformation and faulting behaviour (such as aseismic creep) that happen before the seismic event, which will shed new lights together with lab experiments on the basic physics of induced seismicity. PhD student Deepa is working on this topic.
- **SE Asia seismology**
SE Asia is the most seismically active region in the world despite that many countries are not well prepared to the high seismic hazards, such as Myanmar and Indonesia. We work closely with our local collaborators in these countries on various seismological topics (e.g. earthquake location, focal mechanism inversion, site response, strong ground motion simulations etc.) to improve our scientific understanding of earthquakes, velocity structure, tectonics and seismic hazard. We deploy recently purchased 200 short period stations, together with 20+ broadband seismic stations in these countries to collect unique seismic datasets. All the group members are contributing to this topic.
- **Volcano seismology**
Seismology provide key physical information for volcano structures and seismicity associated with active volcanos. Earthquake location defines the geometry of active faults and earthquake focal mechanism is one of the best proxies for underground stress conditions. Imaging techniques such as receiver functions, tomography and waveform modelling are efficient in imaging the velocity structure beneath volcanos. Dini Nurfiani from the volcano group is working with me on the seismology topics in Sumatra.

Keynote / Invited Presentations

1. "High Resolution Finite Fault Modeling of the Largest Events (M>4.8) in the 2012 Brawley Swarm", 2013, SCEC Annual Meeting, Palm Spring, USA
2. "The 2012 Brawley Swarm triggered by induced aseismic slip", 2015, SSA Annual meeting, Pasadena, USA
3. "Source model and ground shaking of the 2015 Gorkha, Nepal Mw7.8 Earthquake", 2015, Chinese Geoscience Union annual meeting ,Beijing, China
4. "The 2018 Mw7.5 Palu Earthquake, a Gradually Accelerating Super-shear Rupture Stopped by Stress Shadows in a Complex Fault System", 2019, Chinese Geoscience Union annual meeting ,Beijing, China
5. "An integrated 3D velocity structure imaging in Myanmar region", 2020, AOGS, Vivaldi Park, Hongcheon-gun, South Korea (The meeting was cancelled due to the COVID-19)

Research Funding

External Grants

Role	Year	Project Title	Amount (\$\$)	Source of Grant
PI	2020-2023	New Constraints on Fault Geometry and Rupture Propagation of Mega-earthquakes	668,580	MOE-Tier2
Co-PI	2017-2019	Earthquake Physics: Dynamics Of The Lithosphere-Asthenosphere System		MOE-Tier1
Co-PI	2017-2019	Integrated studies of the strength of Earth's lithosphere		MOE-Tier1

Internal Grants

Role	Year	Project Title	Amount (\$\$)	Source of Grant
PI	2015-2021	Sumatran Seismology		RCE (MOE AcRF) internal funding
PI	2016-2021	Myanmar Seismology		RCE (MOE AcRF) internal funding
PI	2017-2019	Tsunami Earthquake		RCE (MOE AcRF) internal funding
PI	2017	A short period array for EOS		RCE (MOE AcRF) internal funding
Co-PI	2014- Now	10+ projects at EOS		RCE (MOE AcRF) internal funding

Citation Summary *(according to the citation report at Appendix 1)*

Database	Citation Count		H-index
	without self-citations	with self-citations	
Scopus	1908	1982	20
Web of Science (SCI)	1872	1794	20
Google Scholar		2763	24

List of Publications *(in chronological order, starting with the most recent)*

_____	Corresponding author
Bold	Denotes main author
**	Denotes directly supervised research staff, i.e. POs, RAs, RFs, postdocs, etc.
*	Denotes PhD students
#	Denotes Tier 1 papers

Journal Papers

[Total: 63, Last 3 years(18-20): 25]

2020

63. Qiu, Q.**, Barbot, S., Wang, T. and **Wei, S.**, 2020. Slip Complementarity and Triggering between the Foreshock, Mainshock, and Afterslip of the 2019 Ridgecrest Rupture Sequence. *Bulletin of the Seismological Society of America.* #

62. Martin, S.S. **, Wang, Y., Muzli, M. and **Wei, S.**, 2020. The 1922 Peninsula Malaysia Earthquakes: Rare Intraplate Seismicity within the Sundaland Block in Southeast Asia. *Seismological Research Letters.*#

61. Sasmi, A.T., Nugraha, A.D., Muzli, M., Widiyantoro, S., Zulfakriza, Z., **Wei, S.**, Sahara, D.P., Riyanto, A., Puspito, N.T., Priyono, A. and Greenfield, T., 2020. Hypocenter and Magnitude Analysis of Aftershocks of the 2018 Lombok, Indonesia, Earthquakes Using Local Seismographic Networks. *Seismological Research Letters.* #

60. Salman, R., Lindsey, E.O., Lythgoe, K.H., Bradley, K., Muzli, M., Yun, S.H., Chin, S.T., J. Tay, C.W., Costa, F., **Wei, S.** and Hill, E.M., 2020. Cascading Partial Rupture of the Flores Thrust during the 2018 Lombok Earthquake Sequence, Indonesia. *Seismological Research Letters.*#

59. Ramos, M.D., Neo, J.C., Thakur, P., Huang, Y. and **Wei, S.**, 2020. Stress Changes on the Garlock fault during and after the 2019 Ridgecrest Earthquake Sequence. *Bulletin of the Seismological Society of America.* #

58. N.D. Hananto, F. Leclerc, L. Li, M. Etchebes, H. Carton, P. Tapponnier, Y. Qin, P. Avianto, S.C. Singh, and **S.J. Wei**, 2020, Tsunami earthquakes: Vertical pop-up expulsion at the forefront of subduction megathrust. *Earth and Planetary Science Letters*, 538, p.116197.#

57. *Q.B. Shi, S. Barbot, **S.J. Wei**, P. Tapponnier, T. Matsuzawa, B. Shibazaki, 2020, Structural control and system-level behavior of the seismic cycle at the Nankai Trough. *Earth, Planets and Space (Online)*, 72(1).#

56. *H.Y. Zeng, **S.J. Wei** and WB Wu (2019), Sources of uncertainties and artefacts in back-projection results, *Geophysical Journal International*, 220 (2), 876-891. #

55. R. Salman, E.O. Lindsey, L. Feng, K. Bradley, **S.J. Wei**, T. Wang, M.R. Daryono, and E.M. Hill, 2020, *Journal of Geophysical Research: Solid Earth*, p.e2019JB018101#

54. **K.H. Lythgoe, M.O.S. Qing, and **S.J. Wei**, 2020, Large-scale crustal structure beneath Singapore using receiver functions from a dense urban nodal array. *Geophysical Research Letters.*#

2019

53. Bradley, K., Mallick, R., Andikagumi, H., Hubbard, J., Meilianda, E., Switzer, A., Du, N., Brocard, G., Alfian, D., Benazir, B. and Feng, G., 2019. Earthquake-triggered 2018 Palu Valley landslides enabled by wet rice cultivation. *Nature Geoscience*, 12(11), pp.935-939.#

52. **Y Qian, X Chen, H Luo, **S.J. Wei**, T Wang, Z Zhang, X Luo (2019), An extremely shallow Mw4. 1 thrust earthquake in the eastern Sichuan Basin (China) likely triggered by unloading during infrastructure construction, *Geophysical Research Letters*. #

51. X Shi, P Tapponnier, T Wang, **S Wei**, Y Wang, X Wang, L Jiao (2019), Triple junction kinematics accounts for the 2016 Mw 7.8 Kaikoura earthquake rupture complexity, *Proceedings of the National Academy of Sciences* 116 (52), 26367-26375.#

50. LT Aung, SS Martin, Y Wang, **SJ Wei**, M Thant, KN Htay, HM Aung, TZ Kyaw, S Min, K Sithu, and T Naing, (2019). A comprehensive assessment of ground motions from two 2016 intra-slab earthquakes in Myanmar. *Tectonophysics*.#

49. **Y Qian, **SJ Wei**, W Wu, H Zeng, A Coudurier-Curveur and S Ni, (2019) Teleseismic waveform complexities caused by near trench structures and their impacts on earthquake source study: application to the 2015 Illapel aftershocks (Central Chile), *Journal of Geophysical Research Solid Earth*.#

48. **M Chen, **SJ Wei**, (2019), The 2015 Gorkha (Nepal) Earthquake sequence: II. Broadband simulation of ground motion in Kathmandu, *Bulletin of the Seismological Society of America*.#

47. S Liu, I Suardi, D Yang, **SJ Wei**, P Tong, (2019) Teleseismic travelttime tomography of the northern Sumatra, *Geophysical Research Letters*. #

46. **X. Wang, **SJ Wei**, Y Wang, P. Maung-Maung, J Hubbard, P Banerjee, B Huang, K Moe-Oo, T. Bodin, A Foster and R Almeida, (2019) A 3D Shear-Wave Velocity Model for Myanmar Region, *Journal of Geophysical Research Solid Earth*. #

45. K Materna, **SJ Wei**, X Wang, H Luo, T Wang, W Chen, R Salman, R Bürgmann (2019), Source characteristics of the 2017 Mw 6.4 Moijabana, Botswana earthquake, a rare lower-crustal event within an ancient zone of weakness, *Earth and Planetary Science Letters*. #

2018

45. **T. Wang, *Q. Shi, M. Nikkhoo, **SJ Wei**, S. Barbot, D. Dreger, R. Bürgmann, M. Motagh, and Q.F. Chen, 2018. The rise, collapse, and compaction of Mt. Mantap from the 3 September 2017 North Korean nuclear test. *Science*, 361(6398), pp.166-170.

44. **M Muzli, M Umar, AD Nugraha, KE Bradle, S Widiyantoro, K Erbas, P Jousset, S Rohadi, I Nurdin, **SJ Wei**. (2018) The 2016 M w 6.5 Pidie Jaya, Aceh, North Sumatra, Earthquake: Reactivation of an Unidentified Sinistral Fault in a Region of Distributed Deformation. *Seismological Research Letters*. 2018 Jul 25. #

43. W Wu, S Ni, Z Zhan, **SJ Wei**. (2018) An SEM-DSM three-dimensional hybrid method for modelling teleseismic waves with complicated source-side structures. *Geophysical Journal International*. 215(1):133-54. #

42. *Q. Shi, **SJ Wei**. and M. Chen, 2018. An MCMC multiple point sources inversion scheme and its application to the 2016 Kumamoto Mw 6.2 earthquake. *Geophysical Journal International*. #

41. **X Wang, KE Bradley, **SJ Wei**, W Wu, (2018) Active backstop faults in the Mentawai region of Sumatra, Indonesia, revealed by teleseismic broadband waveform modeling, *Earth and Planetary Science Letters* 483, 29-38. #

40. **T Wang, **SJ Wei**, X Shi, Q Qiu, L Li, D Peng, RJ Weldon, S Barbot, (2018) The 2016 Kaikōura earthquake: Simultaneous rupture of the subduction interface and overlying faults, *Earth and Planetary Science Letters* 482, 44-51. #

39. **S. Wei**, M Chen, X Wang, R Graves, E Lindsey, T Wang, Ç Karakaş and D Helmberger, (2018) The 2015 Gorkha (Nepal) earthquake sequence: I. Source modeling and deterministic 3D ground shaking, *Tectonophysics* 722, 447-461. #

2017

38. **X Wang, **SJ Wei**, W Wu, (2017) Double-ramp on the Main Himalayan Thrust revealed by broadband waveform modeling of the 2015 Gorkha earthquake sequence, *Earth and Planetary Science Letters* 473, 83-93#

37. Y Qian, S Ni, **SJ Wei**, R Almeida, H Zhang, (2017) The effects of core-reflected waves on finite fault inversions with teleseismic body wave data, *Geophysical Journal International* 211 (2), 958-973. #

36. X Xiong, B Shan, YM Zhou, **SJ Wei**, YD Li, RJ Wang, Y Zheng, (2017) Coulomb Stress Transfer and Accumulation on the Sagaing Fault, Myanmar over the Past 110 years and Its Implications for Seismic Hazard, *Geophysical Research Letters*, <https://doi.org/10.1002/2017GL072770>. #

35. J. Moore, H. Yu, C-H. Tang, T. Wang, S. Barbot, D.J. Peng, S. Masuti, J. Dauwels, Y-J. Hsu, V. Lambert, P. Nanjudiah, **SJ Wei**, E. Lindsey, L. Feng and B. Shibazaki (2017), Imaging the distribution of transient viscosity after the 2016 Mw 7.1 Kumamoto earthquake, *Science*. #

34. Y. Wang, **SJ Wei**, X. Wang, E. Lindsey, F. Tongkul, K. Bradley, C. Han, E. Hill, K. Sieh. (2017) The 2015 Mw 6.0 Mt. Kinabalu Earthquake: An Infrequent Fault Rupture within the Crocker Fault System of East Malaysia, *Geoscience Letters*.

33. R. Chu, J. Ko, **SJ Wei**, Z. Zhan and D. Helmberger, (2017) Lithospheric Radial Anisotropy beneath the Gulf of Mexico, *Earth and Planetary Science Letters*. #

32. V. Lai, R. Graves, **SJ Wei**, DV Helmberger, (2017) Evidence for fast seismic lid structure beneath the Californian margin and its implication on regional plate deformation, *Earth and Planetary Science Letters*. #

31. X Shi, Y Wang, J Liu-Zeng, R Weldon, **SJ Wei**, T Wang, K Sieh, (2017) How complex is the 2016 M w 7.8 Kaikoura earthquake, South Island, New Zealand? *Science Bulletin*.

30. S. Singh, N. Hananto, Y. Qin, F. Leclerc, P. Avianto, P. Tapponnier, H. Carton, **S. J. Wei**, A. Nugroho, W. Gemilang, K. Sieh, S. Barbot. The discovery of a conjugate system of faults in the Wharton Basin intraplate deformation zone. *Science Advances*. 2017 Jan 1;3(1):e1601689. #

2016

29. S. Lui, D. V. Helmberger, J. Yu, **S. J. Wei**, Rapid Assessment of Earthquake Source Characteristics, *Bulletin of the Seismological Society of America* #

28. X. Wang, Q. F. Chen, J. Li and **S. J. Wei**, Seismic sensor misorientation measurement using P wave particle motion: an application to the NECSAids Array, *Seismological Research Letters*, 87 (4), 901-911#

2015

27, T. Wang, **S. J. Wei**, and S. Jonsson, Coseismic displacements from SAR image offsets between different satellite sensors: Application to the 2001 Bhuj (India) earthquake, *Geophysical Research Letters*. 42 (17), 7022-7030#

26, J. P. Avouac, L. S. Meng, **S. J. Wei**, T. Wang and J. P. Ampuero, Lower edge of locked Main Himalayan Thrust unzipped by the 2015 Gorkha earthquake, *Nature Geoscience*, doi:10.1038/ngeo2518. #

25. **S. J. Wei**, J. P. Avouac, K. Hudnut, J. Paker, D. Andrea, R. Graves, D. Helmberger, E. Fielding, Z. Liu, F. Cappa and M. Eneva, The 2012 Brawley Swarm triggered by induced aseismic slip, *Earth and Planetary Science Letters*, 422 (2015) 115–125. #

24. W. W. Chen, S. D. Ni, H. Kanamori, **S. J. Wei**, Z. Jia and L. P. Zhu, CAPjoint, A Computer Software Package for Joint Inversion of Moderate Earthquake Source Parameters with Local and Teleseismic Waveforms, *Seismological Research Letters*, 2015, 86 (2A), 432-441. #

23. **S. J. Wei**, S. Barbot, R. W. Graves, J. J. Lienkaemper, T. Wang, K. Hudnut, Y. N. Fu and D. Helmberger, The 2014 Mw6.1 South Napa Earthquake: A unilateral rupture with shallow asperity and rapid afterslip, *Seismological Research Letters*, 2015, 86 (2A), 344-354. #

22. S. Lui, D. V. Helmberger, **S. J. Wei**, Y. H. Huang and R. Graves, Interrogation of the megathrust zone in the Tohoku-Oki seismic region by waveform complexity: intraslab earthquake rupture and reactivation, *Pure Applied Geophysics*, 2015, DOI 10.1007/s00024-015-1042-9. #

2014

21, J. P. Avouac, F. Ayoub, **S. J. Wei**, J. P. Ampuero, L. S. Meng, S. Leprince, R. Jolivet, Z. Duputel and D. V. Helmberger, Seismic slip boosted on a misoriented fault bend during the 2013, Mw 7.7 Balochistan Earthquake, *Earth and Planetary Science Letters*, 2014, <http://dx.doi.org/10.1016/j.epsl.2014.01.036>. #

2013

20, Z. W. Zhan, H. Kanamori, V. Tsai, D. V. Helmberger and **S. J. Wei**, Rupture complexity of the 1994 Bolivia and 2013 Sea of Okhotsk deep earthquakes, *Earth and Planetary Science Letters*, 2013, 385, 89-96. #

19, **S. J. Wei**, D. V. Helmberger and J. P. Avouac, Modeling the 2012 Wharton Basin Earthquakes off-Sumatra; Complete Lithospheric Failure, *Journal of Geophysical Research Solid Earth*, 2013, 118, 3592–3609, doi:10.1002/jgrb.50267. #

18, **S. J. Wei**, D. V. Helmberger, S. Owen, R. W. Graves, K. W. Hudnut and E. Fielding, Complementary slip distributions of the largest earthquakes in the 2012 Brawley swarm, Imperial Valley, California, *Geophysical Research Letters*, 2013, 40, 1–6, doi:10.1002/grl.50259. #

17, **S. J. Wei**, D. V. Helmberger, Z.W. Zhan and R. W. Graves, Rupture complexity of the Mw 8.3 Sea of Okhotsk earthquake: rapid triggering of complementary earthquakes?, *Geophysical Research Letters*, 2013, 40, 1-6, doi: 10.1002/grl.50977. #

2012

16, **S. J. Wei**, Z. W. Zhan, Y. Tan, S. D. Ni and D. Helmberger, Locating earthquake with surface waves and centroid moment tensor estimation, *Journal of Geophysical Research Solid Earth*, 2012, 117, doi:10.1029/2011JB008501. #

15, **S. J. Wei**, R. W. Graves, D. V. Helmberger, J-P. Avouac and J. L. Jiang, Different rupture sources of shaking and flooding during the Tohoku-Oki Earthquake: a mixture of rupture style, *Earth and Planetary Science Letters*, 2012, 91-100. #

14, R. S. Chu, **S. J. Wei**, D. Helmberger, Z. W. Zhan, L. P. Zhu and H. Kanamori, Initiation of the great Mw 9.0 Tohoku–Oki earthquake, *Earth and Planetary Science Letters*, 2011, doi:10.1016/j.epsl.2011.06.031. #

13, Z. L. Yu, S. D. Ni, **S. J. Wei**, X. F. Zeng, W. B. Wu and Z. W. Li, An iterative algorithm for separation of S and ScS waves of great earthquakes, *Geophysical Journal International*, 2012, 191, 591~600, doi: 10.1111/j.1365-246X.2012.05603.x. #

2011

12, **S. J. Wei**, E. Fielding, S. Leprince, A. Sladen, J.P. Avouac, D. Helmberger, E. Hauksson, R. S. Chu, M. Simons, K. Hudnut, T. Herring & R. Briggs, Superficial simplicity of the 2010 El Mayor–Cucapah earthquake of Baja California in Mexico, *Nature Geoscience*, 2011 doi:10.1038/ngeo1213. #

11, **S. J. Wei**, S. D. Ni, X. J. Zha, Z. J. Wang and D. Helmberger, Source model of the 11th July 2004 Zhongba earthquake revealed from the joint inversion of InSAR and seismological data, *Earthquake Science*, 2011, 24(2), 207~220, DOI: 10.1007/s11589-010-0785-8.

10, Z. W. Zhan, **S. J. Wei**, S. D. Ni and D. Helmberger, Earthquake Centroid Locations Using Calibration from Ambient Seismic Noise, *Bulletin of the Seismological Society of America*, 2011, 101(3), 1438~1445; DOI: 10.1785/0120100118. #

9, Z. W. Zhan, B. K. Jin, **S. J. Wei** and R. W. Graves, Coulomb Stress Change Sensitivity due to Variability in Mainshock Source Models and Receiving Fault Parameters: A Case Study of the 2010-2011 Christchurch, New Zealand, Earthquakes, *Seismological Research Letters*, 82: 800~814. #

8, B. Shan, X. Xiong, Y. Zheng, **S. J. Wei**, Y. M. Wen, B. K. Jin and C. Ge, The co-seismic Coulomb stress change and expected seismicity rate caused by 14 April 2010 Ms =7.1 Yushu, China, earthquake, 2011, *Tectonophysics*, 510, 345~353. #

7, W. W. Chen, S. D. Ni, **S. J. Wei**, Z. J. Wang and J. Xie, Effects of sedimentary layer on earthquake source modeling from geodetic inversion, *Earthquake Science*, 2011, 24(2)

6, M. Simons, S. E. Minson, A. Sladen, F. Ortega, J. L. Jiang, S. E. Owen, L. S. Meng, J-P Ampuero, **S. J. Wei**, R. S. Chu, D. V. Helmberger, H. Kanamori, E. Hetland, A. W. Moore, F. H. Webb, The 2011 Magnitude 9.0 Tohoku-Oki Earthquake: Mosaicking the Megathrust from Seconds to Centuries, *Science*, 2011, 332(6036) ,1421~1425, DOI: 10.1126/science.1206731. 1674~4519. #

2010

5, Y. Tan, A. Song, **S. J. Wei** and D. Helmberger, Surface Wave Path Corrections and Source Inversions in Southern California, *Bulletin of the Seismological Society of America*, 100(6), 2891~2904, DOI: 10.1785/0120090063. #

4, Y. Luo, Y. Tan, **S. J. Wei**, D. Helmberger, Z. W. Zhan, S. D. Ni, E. Hauksson and Yong Chen, Source Mechanism and Rupture Directivity of the May 18, 2009 MW 4.6 Inglewood, California, Earthquake, Bulletin of the Seismological Society of America, 2010, 100(6), 3269-3277, DOI: 10.1785/0120100087. #

2009

3, **S. J. Wei**, S. D. Ni, J. J. Chong, Y. Zheng, Y. Chen, The 16 August 2003 Chifeng earthquake: Is it a lower crust earthquake? Chinese J. Geophys. (in Chinese with English abstract), 2009, 52(1); 111-119.

2, Y. Zheng, H. S. Ma, J. Lv, S. D. Ni, Y. C. Li and **S. J. Wei**, Source mechanism of strong aftershocks ($M_s \geq 5.6$) of the 2008/05/12 Wenchuan earthquake and the implication for seismotectonics, Science in China Series D-Earth Sciences, 2009, 52(6) 739-753.

2008

1, E. Hauksson, K. Felzer, D. Given, M. Giveon, S. Hough, K. Hutton, H. Kanamori, V. Sevilgen, **S. J. Wei**, A. Yong, Preliminary Report on the 29 July 2008 Mw 5.4 Chino Hills, Eastern Los Angeles Basin, California, Earthquake Sequence. 2008, Seismological Research Letters, 79(6): 855-866. #

TEACHING SUMMARY

Courses Taught (since joining NTU)

Course Code	Course Title	Academic Year	Course Level
ES4092	Geophysical Data Analysis	AY15 – present	UG+PG
ES7016	Observational Seismology	AY15 – present	UG+PG
ES7001/8001	Natural Hazards and Society	AY15 – present	UG+PG
ES7002	Research Skills in Earth System Science	AY15 – AY17	PG

Academic Supervision and Mentoring

PhD students

No.	PhD Student	Period	Role	Thesis/ Project Title	Current Status
Current					
1	Qibin Shi	2016 - present	Supervisor	Multiple point source inversion for medium to large earthquakes in complex structure	-
2	Wardah FADIL	2017 – present	Supervisor	Myanmar seismology and neotectonics	
3	NANJUNDIAH PRIYAMVADA	2018 – present	Supervisor	Kinematic slip model inversion and statistics for large earthquakes	Expected time of graduation in April 2020
4	Yunyi Qian (visiting PhD)	2017 – 2018	Co-Supervisor	Earthquake focal mechanism with sparse	Postdoc at Southern

	student)			network	University of Science and Technology
5	Heng Luo (visiting PhD student)	2017 - 2018	Co-supervisor	High-resolution surface deformation from small to medium size earthquakes	PhD student at Wuhan University
Graduated					
1	MELE VEEDU DEEPA	2018 – 2019 Nov	Supervisor	Rock physics revealed by slow slip earthquake dynamic simulations and laboratory rock experiments	graduated

Masters students (By Coursework) & Undergraduate Students

No. Graduated [Since joining NTU]			No. Currently Supervising		
MSc#	FYP	URECA	MSc#	FYP	URECA
	3 (Fang Shiyuan, Jing-Ci Neo, Ong Su Qing)	1 (Huiwen Sun)			

#MSc students (by coursework), include those taking either dissertation or Independent Study Module

Post-doctoral fellows

No.	Post-doc Fellow	Appointment	Period	Thesis/ Project Title	Current Status
In employment					
1	Weiwen Chen	Research Fellow	2015 - present	Joint inversion of regional and teleseismic waveforms for moment tensor inversion	
2	Karen Lythgoe	NTU Presidential Postdoctoral Fellow	2018 – present	Seismic structure Earth's inner core and its mineralogical and dynamical interpretation	
Left service					
1	Teng Wang	Senior Research Fellow	2017–2018		Asst. Prof at Peking University
2	Xin Wang	Research Fellow	2017-2019		Postdoctoral Research Fellow, Caltech

3	Meng Chen	Research Fellow	2015 - 2019		Research assist. Prof., University of Electronic Science and Technology of China
4	Muzli MUZLI	Research Fellow	2015 – 2019		BMKG

SERVICE SUMMARY

Service Awards / Recognition

Year	Role
2018	Editors Citation for Excellence in Refereeing-Geophysical Research Letters

School

Period of appointment	Role
Feb 2020 – present	Assistant Chair for Research at ASE
Nov 2019 - Feb 2020	temporary Assistant Chair for Research at ASE
2018 - present	Chair of High Performance Cluster at ASE/EOS
2016	PhD examiner of Dr. Qiang Qiu at ASE/EOS (geodesy and geophysics)
2014 - 2016	Department seminar organizer

University

Period of appointment	Role
2018	Organized “Advanced Waveform Seismology” Workshop at NTU
2015	Organized Sloan Foundation workshop “Frontiers in earthquake hazards science and earthquake preparedness: Reducing the risk and promoting resilience” at NTU

Academic Community

Period of appointment	Role
2019 - 2020	Guest Editor of “Geoscience Letters”
2018 May	External thesis reviewer for Dr. Yunyi Qian from USTC (geophysics)
2017 May	External thesis reviewer for Dr. Xiaohui He from USTC (geophysics)
2014 - present	Served as reviewer for more than 10 tier-1 journals (Science, Scientific Report, EPSL, GRL, JGR-solid earth, Tectonophysics, SRL, BSSA, GJI, Pure and Applied Geophysics, Geology, Geoscience Letters, JVGR, Earth and Planetary Science, Earth and Planetary Physics, Journal of Seismology, Earth Science of China, Science China – Earth Science, Journal of Geophysics of China, Earthquake Science)

Other Service

Period of appointment	Role
2018-present	Panel member for Stephen Riady GeoScience Scholarship at ASE/EOS
2017-2018	Served as faculty representative for the tectonic group
2015, 2016	Recruit interview for ASE undergraduate student (2015, 2016 intake)
2015, 2016	NTU open house service to recruit undergraduate students
2016	Chief scientist, drafting and the paperwork for the MoU between EOS/ASE and Department of Meteorology and Hydrology and Myanmar Earthquake Committee
2018	Served as chief scientist in organizing the MoU between EOS/ASE and Syiah Kuala University (Indonesia)
2016, April	Held a short training course for the STMKG (Research Institute of Indonesian Agency for Meteorology, Climatology and Geophysics) undergraduate students
2018, Feb	Held a workshop and training course for the Geophysical students in Syiah Kuala University and its Tsunami and Disaster Mitigation Research Center