

# Eric O. Lindsey

Assistant Professor  
Department of Earth and Planetary Sciences  
University of New Mexico  
Albuquerque, New Mexico 87131

[eol@unm.edu](mailto:eol@unm.edu)  
[www.planetmechanic.net](http://www.planetmechanic.net)  
+1 (505) 361-7646

---

---

## EMPLOYMENT AND EDUCATION

- 2021 - present: Assistant Professor, University of New Mexico.
- 2015 – 2020: Research Fellow, Earth Observatory of Singapore.
- 2015 – 2017: Visiting Scholar, University of California, Berkeley.
- 2015: Ph.D. Earth Sciences, Scripps Institution of Oceanography, University of California, San Diego.
- 2010: M.S. Physics, University of Oregon, Eugene, Oregon.
- 2008: B.A. Physics, Reed College, Portland, Oregon.

## PUBLICATIONS:

- 28. Tay, C., **E. O. Lindsey**, S. T. Chin, J. W. McCaughey, D. Bekaert, M. Nguyen, H. Hua, G. Manipon, M. Karim, B. P. Horton, T. Li, E. M. Hill, Sea-level rise from land subsidence in major coastal cities, *Nat. Sustain.* 5, 1049–1057, [doi:10.1038/s41893-022-00947-z](https://doi.org/10.1038/s41893-022-00947-z), 2022.
- 27. Tha Zin Htet Tin, T. Nishimura, M. Hashimoto, **E. O. Lindsey**, Lin Thu Aung, Saw Myat Min, Myo Thant, Present-day Crustal Deformation and Slip Rate Along Southern Sagaing fault by GNSS Observation in Myanmar, *J. Asian Earth Sciences* 228(11): 105125, [doi:10.1016/j.jseas.2022.105125](https://doi.org/10.1016/j.jseas.2022.105125), 2022.
- 26. Meilano, I., R. Salman, S. Rahmadani, S. Susilo, **E. O. Lindsey**, P. Supendi, D. Daryono, Source characteristics of the 2019 Mw 6.5 Ambon earthquake, eastern Indonesia inferred from seismic and geodetic data, *Seismol. Res. Lett.* 92 (6): 3339–3348, [doi:10.1785/0220210021](https://doi.org/10.1785/0220210021), 2021.
- 25. Fadil, W., **E. O. Lindsey**, Y. Wang, P. M. Maung, H. Luo, H. H. Aung, P. P. Tun, T. L. Swe, S. H. Than, S. Wei, The 11th January 2018, Mw 6.0 Bago-Yoma, Myanmar earthquake: A shallow thrust event within the deforming Bago-Yoma Range, *J. Geophys. Res. Solid Earth* 126, e2020JB021313, [doi:10.1029/2020JB021313](https://doi.org/10.1029/2020JB021313), 2021.
- 24. **Lindsey, E. O.**, R. Mallick, J. A. Hubbard, K. E. Bradley, R. Almeida, J. D. P. Moore, R. Bürgmann, and E. M. Hill, Slip rate deficit and earthquake potential on shallow megathrusts, *Nat. Geosci.* 14, 321-326, [doi:10.1038/s41561-021-00736-x](https://doi.org/10.1038/s41561-021-00736-x), 2021.
- 23. Mallick, R., A. J. Meltzner, L. L. H. Tsang, **E. O. Lindsey**, L. Feng, and E. M. Hill, Long-lived

- Shallow Slow-slip Events on the Sunda Megathrust, *Nat. Geosci.*, 14, 327-333, [doi:10.1038/s41561-021-00727-y](https://doi.org/10.1038/s41561-021-00727-y), 2021.
22. Materna, K., L. Feng, **E. O. Lindsey**, E. M. Hill, A. Ahsan, A. K. M. Khorshed Alam, K. M. Oo, O. Than, T. Aung, S. N. Khaing, and R. Burgmann, GNSS characterization of hydrological loading in South and Southeast Asia, *Geophys. J. Int.*, 224, 1742-1752, [doi:10.1093/gji/ggaa500](https://doi.org/10.1093/gji/ggaa500), 2021.
  21. Mallick, R., J. A. Hubbard, **E. O. Lindsey**, K. E. Bradley, J. D. P. Moore, and E. M. Hill, Subduction initiation and the rise of the Shillong Plateau, *Earth Planet. Sci. Lett.*, 543, 116351. [doi:10.1016/j.epsl.2020.116351](https://doi.org/10.1016/j.epsl.2020.116351), 2020.
  20. Salman, R., **E. O. Lindsey**, K. H. Lythgoe, K. E. Bradley, M. Muzli, S.-H. Yun, S. T. Chin, C. W. Tay, F. R. Costa, S. Wei, and E. M. Hill, Cascading partial rupture of the Flores thrust during the 2018 Lombok earthquake sequence, Indonesia, *Seismol. Res. Lett.*, 91 (4), 2141 - 2151, [doi:10.1785/0220190378](https://doi.org/10.1785/0220190378), 2020.
  19. Park, E., E. Merino, Q. W. Lewis, **E. O. Lindsey**, and X. Yang, A Pathway to the Automated Global Assessment of Water Level in Reservoirs with Synthetic Aperture Radar (SAR). *Rem. Sens.* 12, 1353. [doi:10.3390/rs12081353](https://doi.org/10.3390/rs12081353), 2020.
  18. Salman, R., **E. O. Lindsey**, L. Feng, K. Bradley, S. Wei, T. Wang, M. R. Daryono, and E. M. Hill, Structural controls on rupture extent of Sumatran Fault Zone earthquakes, Indonesia, *J. Geophys. Res. Solid Earth*, 125, [doi:10.1029/2019JB018101](https://doi.org/10.1029/2019JB018101), 2020.
  17. Mallick, R., **E. O. Lindsey**, L. Feng, J. Hubbard, P. Banerjee, E. Hill, Active convergence of the India-Burma-Sunda plates revealed by a new continuous GPS network, *J. Geophys. Res. Solid Earth*, 124, 3155 - 3171, [doi:10.1029/2018JB016480](https://doi.org/10.1029/2018JB016480), 2019.
  16. Xu, X., L. Ward, J. Jiang, B. Smith-Konter, E. Tymofyeyeva, **E. O. Lindsey**, A. G. Sylvester and D. T. Sandwell, Surface Creep Rate of the Southern San Andreas Fault Modulated by Stress Perturbations from Nearby Large Events, *Geophys. Res. Lett.*, [doi:10.1029/2018GL080137](https://doi.org/10.1029/2018GL080137), 2018.
  15. **Lindsey, E. O.**, R. Almeida, R. Mallick, J. Hubbard, K. Bradley, L. L. H. Tsang, Y. Liu, R. Burgmann, E. M. Hill, Structural Control on Down-dip Locking Extent of the Himalayan Megathrust, *J. Geophys. Res. Solid Earth*, 123, 5265–5278, [doi:10.1029/2018JB015868](https://doi.org/10.1029/2018JB015868), 2018.
  14. Almeida, R., **Lindsey, E. O.**, K. Bradley, J. Hubbard, R. Mallick, E. M. Hill, Can the up-dip limit of frictional locking on megathrusts be detected geodetically? Quantifying the effect of stress shadows on near-trench coupling, *Geophys. Res. Lett.*, 45, 4754–4763, [doi:10.1029/2018GL077785](https://doi.org/10.1029/2018GL077785), 2018.
  13. Wei, S., M. Chen, X. Wang, R. Graves, **E. O. Lindsey**, T. Wang, C. Karakas, D. Helmberger, The 2015 Gorkha (Nepal) Earthquake sequence: I. Source modeling and deterministic 3D ground shaking, *Tectonophysics*, 722, 447–461, [doi:10.1016/j.tecto.2017.11.024](https://doi.org/10.1016/j.tecto.2017.11.024), 2018.
  12. Salman, R., E. M. Hill, L. Feng, **E. O. Lindsey**, D. M. Veedu, S. Barbot, P. Banerjee I. Herawan, D. H. Natawidjaja, Piecemeal rupture of the Mentawai patch: The 2008 Mw 7.2 North Pagai earthquake sequence, *J. Geophys. Res. Solid Earth*, 122, 9404–9419, [doi:10.1002/2017JB014341](https://doi.org/10.1002/2017JB014341), 2017.

11. Moore, J. D. P., H. Yu, C.-H. Tang, T. Wang, S. Barbot, D. Peng, S. Masuti, J. Dauwels, Y. Hsu, V. Lambert, P. Nanjundiah, S. Wei, **E. O. Lindsey**, L. Feng and B. Shibazaki, Imaging the distribution of transient viscosity after the 2016 Mw 7.1 Kumamoto earthquake, *Science*, 356, 163–167, [doi:10.1126/science.aal3422](https://doi.org/10.1126/science.aal3422), 2017.
10. Wang, Y., S. Wei, W. Xin, **E. O. Lindsey**, F. Tongkul, K. Bradley, C. Chan, E. Hill, K. Sieh, The 2015  $M_W$  6.0 Mt. Kinabalu Earthquake: An Infrequent Fault Rupture within the Crocker Fault System of East Malaysia. *J. Asian Earth Sciences*, 4, [doi:10.1186/s40562-017-0072-9](https://doi.org/10.1186/s40562-017-0072-9), 2017.
9. Morgan, P., L. Feng, A. J. Meltzner, **E. O. Lindsey**, L. L. H. Tsang and E. M. Hill, Sibling earthquakes generated within a persistent rupture barrier on the Sunda megathrust under Simeulue Island, *Geophys. Res. Lett.*, 44, 2159–2166, [doi:10.1002/2016GL071901](https://doi.org/10.1002/2016GL071901), 2017.
8. Qiu, Q., E. M. Hill, S. Barbot, J. Hubbard, W. Feng, **E. O. Lindsey**, L. Feng, K. Dai, S. Samsonov, and P. Tapponnier, The mechanism of partial rupture of a locked megathrust: The role of fault morphology, *Geology*, 44, 875–878, [doi: 10.1130/G38178.1](https://doi.org/10.1130/G38178.1), 2016.
7. **Lindsey, E. O.** and Y. Fialko, Geodetic constraints on frictional properties and earthquake hazard in the Imperial Valley, southern California, *J. Geophys. Res. Solid Earth*, 121, 1097–1113, [doi: 10.1002/2015JB012516](https://doi.org/10.1002/2015JB012516), 2016.
6. Feng, W., **E. O. Lindsey**, S. Barbot, S. Samsonov, K. Dai, P. Li, Z. Li, R. Almeida, J. Chen, X. Xu, Source characteristics of the 2015  $M_W$  7.8 Gorkha (Nepal) earthquake and its  $M_W$  7.2 aftershock from space geodesy, *Tectonophysics*, 712–713, 747–758, [doi:10.1016/j.tecto.2016.02.029](https://doi.org/10.1016/j.tecto.2016.02.029), 2016.
5. Galetzka, J., D. Melgar, J. F. Genrich, J. Geng, S. Owen, **E. O. Lindsey**, X. Xu, Y. Bock, J.-P. Avouac, L. B. Adhikari, B. N. Upreti, B. Pratt-Sitaula, T. N. Bhattarai, B. P. Sitaula, A. Moore, K. W. Hudnut, W. Szeliga, J. Normandeau, M. Fend, M. Flouzat, L. Bollinger, P. Shrestha, B. Koirala, U. Gautam, M. Bhattarai, R. Gupta, T. Kandel, C. Timsina, S. N. Sapkota, S. Rajaure, N. Maharjan, Slip pulse and resonance of Kathmandu basin during the 2015  $M_W$  7.8 Gorkha earthquake, Nepal imaged with space geodesy. *Science*, 349, 1091–1095, [doi:10.1126/science.aac6383](https://doi.org/10.1126/science.aac6383), 2015.
4. **Lindsey, E. O.**, R. Natsuaki, X. Xu, M. Shimada, H. Hashimoto, D. Melgar, and D. Sandwell, Line of Sight Deformation from ALOS-2 Interferometry:  $M_W$  7.8 Gorkha Earthquake and  $M_W$  7.3 Aftershock. *Geophys. Res. Lett.*, 42, 6655–6661, [doi:10.1002/2015GL065385](https://doi.org/10.1002/2015GL065385), 2015.
3. **Lindsey, E. O.**, V. J. Sahakian, Y. Fialko, Y. Bock, S. Barbot, and T. K. Rockwell, Interseismic strain localization in the San Jacinto fault zone, *Pure Appl. Geophys.*, 171, 2937–2954, [doi:10.1007/s00024-013-0753-z](https://doi.org/10.1007/s00024-013-0753-z), 2014.
2. **Lindsey, E. O.**, Y. Fialko, Y. Bock, D. T. Sandwell, R. Bilham, Localized and distributed creep along the southern San Andreas Fault. *J. Geophys. Res. Solid Earth*, 119, 7909–7922, [doi:10.1002/2014JB011275](https://doi.org/10.1002/2014JB011275), 2014.
1. **Lindsey, E. O.** and Y. Fialko, Geodetic Slip Rates in the Southern San Andreas Fault System: Effects of Elastic Heterogeneity and Fault Geometry, *J. Geophys. Res. Solid Earth*, 118, 689–697, [doi:10.1029/2012JB009358](https://doi.org/10.1029/2012JB009358), 2013.

Total citations: 1301, h-index: 16 (Google Scholar, July 2021).

## TEACHING

- 2021: EPS 400/522, Fall. Satellite-based geophysical methods. New course for undergraduates and graduates.
- 2018: ES7021, Spring (at EOS). Space geodesy for Earth science applications. Co-taught new graduate course.
- 2016: ES7015, Spring (at EOS). Supervised Independent Study (InSAR processing and analysis), co-taught graduate course.
- 2015: UC San Diego. SIO 110: Introduction to GIS and GPS for scientists.  
Teaching Assistant, one quarter.
- 2014: UC San Diego. SIO 160: Introduction to Tectonics.  
Teaching Assistant, one quarter.
- 2012: UC San Diego. SIO 1: The Planets.  
Teaching Assistant, one quarter.
- 2009 – 2010: University of Oregon. PHYS 251, 252, 253: Fundamentals of Physics I.  
Lab Instructor, three quarters.
- 2006 – 2008: Reed College, PHYS 101, 102: General Physics I, II.  
Lab Instructor, four semesters.

## SERVICE

- Western North America InSAR (WInSAR) Consortium Executive Committee Chair.** 2021 – present. Leading the planning and development of short courses for the InSAR community, and oversee the data archiving and sharing roles of WInSAR.
- UNAVCO Geodetic Data Services Advisory Committee (GDS-AC).** 2021 – present. The GDS-AC oversees issues related to data licensing and archiving across UNAVCO.
- Computational Infrastructure for Geodynamics (CIG) Short-term dynamics working group committee.** 2014 – 2018. Organized bi-annual workshops for short-term crustal dynamics modeling, determined research priorities for code development and distribution by CIG, and built collaborations among computational geoscientists working on problems with a variety of length scales and timescales.

## EDUCATION AND ENGAGEMENT

**UNM Earth Sciences Computing and Programming Experience (ESCAPE) 2022.** Led an NSF-funded, 2-week summer program for undergraduate students to gain experience and confidence with programming in python, through collecting & analyzing Earth Science datasets.

**Geodesy training in Myanmar.** Led a series of workshops and hands-on short courses at

universities in Myanmar to teach undergraduate and graduate students and lecturers the principles of GPS surveying, programming and data processing, and the use of geodetic data in tectonic studies. Courses taught in 2016 (2 days), 2017 (3 days), 2018 (5 days), 2019 (4 + 5 days).

**Scripps Community Outreach Program for Education (SCOPE)**. 2011– 2015. As a graduate student, volunteered for various outreach and education programs throughout the San Diego community. Events included geology tours, surveying demonstrations, and teaching classes for 5th-6th graders about earthquakes and tectonics.

#### INVITED SEMINARS

“Geodetic imaging of the stress shadow: Large slip deficit on shallow megathrusts and implications for future ruptures.” **USGS Powell Center workshop**, August 2022 (virtual).

“InSAR for the study of earthquakes and tectonic processes.” **InSAR Karyashala 2022**, IIT Roorkee, India, May 2022 (virtual).

“InSAR imaging of land subsidence induced by groundwater extraction across Asia and New Mexico.” **UNM Water Grand Challenge seminar**, April 2021 (virtual).

“Unlocking the physics of megathrusts: geodetic insights into fault properties, stress and slip near the trench.” **University of California San Diego**, March 2021 (virtual).

“Unlocking the physics of megathrusts: geodetic insights into fault properties, stress and slip offshore.” **University of Oregon**, February 2021 (virtual).

“Coastal subsidence in Asian megacities: monitoring rapid relative sea-level rise with InSAR.” **University of Colorado, Boulder**, October 2020 (virtual).

“Unlocking the physics of earthquake hazards with geodesy: megathrusts, mountains and Myanmar.” **University of California Berkeley**, April 2020 (virtual).

“Life in the stress shadow: Stress-constrained inversion for interseismic coupling on shallow megathrusts.” **Géoazur, Observatoire de la Côte d’Azur, Nice, France**, Sept. 2018.

“Combination of geodetic data and structural models to understand earthquake hazard along the Himalayan megathrust.” Keynote speaker, **Myanmar National Conference on Earth Sciences**, Nov. 2017.

“Structural control on the seismic and interseismic behaviour of the Himalayan megathrust.” **Institute de Physique du Globe de Paris, France**, June 2017.

“Creep on the Imperial Fault and new faults in the Salton Trough.” **SCEC SoSAFE Workshop**, Sept. 2016.

“Geometric controls on fault behavior revealed by high resolution space geodesy: fault creep, earthquake rupture and interseismic deformation.” **UNAVCO Science Meeting**, March 2016.

“Geodetic constraints on earthquake hazard and frictional properties in the Imperial Valley.” **2015 AGU Fall Meeting**, Dec. 2015.

“Geodetic constraints on frictional properties and earthquake hazard in the Imperial Valley, southern California.” **USGS Menlo Park**, Sept. 2015.

“Geodetic observations of fault slip rates and fault zone deformation in southern California.” **Géoazur, Observatoire de la Côte d’Azur, Nice, France**, Nov. 2014.

“High-resolution geodetic observations of fault zone deformation on the San Andreas and San Jacinto faults in southern California.” **2013 AGU Fall Meeting**, Dec. 2013.

“Fault Creep: GPS and InSAR opportunities.” **SCEC Community Geodetic Model workshop**, Menlo Park, CA, May 2013.

“Geodesy in HD: Slip rates, fault geometry, and fault zone properties in Southern California.” **Caltech Seismolab Seminar**, May 2013.

“Geodetic Models of the Southern San Andreas Fault: Sensitivity to Elastic Heterogeneity and Fault Geometry.” **San Diego State University Geology Dept. Seminar**, Nov. 2011.

## **FIELD WORK**

2022: Campaign GPS survey of monuments in Valles Caldera, NM, in collaboration with Los Alamos National Labs.

2016 – 2019: Led campaign GPS surveys of more than 100 existing and newly established monuments in Myanmar, focusing on the central and southern Sagaing fault and Rakhine (Arakan) megathrust.

2010 – 2015: Led periodic occupation and processing of ~100 campaign GPS monuments throughout southern California and northern Baja California, Mexico.

2014: Participant in iMUSH active-source seismic imaging project on Mt. St. Helens, WA.

2012: Kinematic GPS survey of Salar de Uyuni, Bolivia. Collection of dense, high precision elevation data for satellite altimeter calibration.