

SURUI XIE

School of Geosciences, University of South Florida
NES 107, 4202 E. Fowler Ave, Tampa, FL 33620, USA

Tel: 813-335-9027 E-mail: suruixie@usf.edu Web: <https://suruixie.github.io/>

EDUCATION

Ph.D., Geology, University of South Florida, Tampa, Florida, USA 2020
M.E., Geodesy and Survey Engineering, Wuhan University, Wuhan, Hubei, China 2014
B.E., Geodesy and Geomatics Engineering, Wuhan University, Wuhan, Hubei, China 2011

APPOINTMENTS

Postdoctoral Scholar, Scripps Institution of Oceanography, UC San Diego, La Jolla, CA Starting Aug 2020
Geodesist, Chinese National Antarctic Research Expedition, Zhongshan Station, Antarctica Nov 2011–Jan 2013

TEACHING EXPERIENCE

TA for *History of Life* Spring 2016 – Spring 2017
 TA for *Dynamic Earth: Introduction to Physical Geology* Fall 2015
 TA for *Introduction to Earth Science* Spring 2015
 TA for *Geology For Engineers* Fall 2014

AWARDS

Scripps Institution of Oceanography Postdoctoral Award 2020
 Chinese National Scholarship 2009

PROFESSIONAL SERVICE

Reviewer for Journals: The Cryosphere; Journal of Glaciology

FIELD EXPERIENCE

Geological field investigations in the Mojave Desert of the Eastern California Shear Zone 2016, 2018
 Marine-terminating glacier studies at Jakobshavn Isbræ of Greenland 2015
 Volcano topography and deformation studies at Nevado del Ruiz in Colombia 2015
 Geodetic surveys in Antarctica 2011–2013

LAB EXPERIENCE

Terrestrial cosmogenic nuclide exposure dating in the Quaternary Geochronology Laboratories at the University of Cincinnati. Jun-Jul 2015, Jul 2016

INSTRUMENT SKILLS

Static and kinematic GNSS, terrestrial interferometer, theodolite, total station, optical and digital level

COMPUTER SKILLS

Programming languages: Python, Fortran, Shell, C++, Matlab, HTML
Software packages: GipsyX, GAMIT/GLOBK/TRACK, SNAP, GMT, QGIS, GIMP, Gnuplot, L^AT_EX
Operating systems: Linux, macOS, Microsoft Windows

PUBLICATIONS

Submitted Manuscripts

- Xie, S.**, Dixon, T.H., Malservisi, R., Jiang, Y., Protti, M., Muller, C. (in review). Slow slip and inter-transient locking on the Nicoya megathrust in the late and early stages of an earthquake cycle. *Journal of Geophysical Research: Solid Earth*.
- Vaňková, I., Nicholls, K.W., **Xie, S.**, Parizek, B.R., Voytenko, D., Holland, D.M. (**accepted**). Depth-dependent artifacts resulting from ApRES signal clipping. *Annals of Glaciology*.

Published Papers (,)

- Deng, F., Dixon, T.H., **Xie, S.** (2020). Surface deformation and induced seismicity due to fluid injection and oil and gas extraction in western Texas. *Journal of Geophysical Research: Solid Earth*, 125, doi:10.1029/2019JB018962.
- Gallant, E., Deng, F., Connor, C., Dixon, T., **Xie, S.**, Saballos, J.A., Guitierrez, C., Myhre, D., Connor, L., Zayac, J., LaFemina, P., Charbonnier, S., Richardson, J., Malservisi, R., Thompson, G. (2020). Deep and rapid thermo-mechanical erosion by a small-volume lava flow. *Earth and Planetary Science Letters*, doi:10.1016/j.epsl.2020.116163.
- Xie, S.**, Law, J., Russell, R., Dixon, T.H., Lembke, C., Malservisi, R., Rodgers, M., Iannaccone, G., Guardato, S., Naar, D.F., Calore, D., Fraticelli, N., Brizzolara, J., Gray, J.W., Hommeyer, M., Chen, J. (2019). Seafloor geodesy in shallow water with GPS on an anchored spar buoy. *Journal of Geophysical Research: Solid Earth*, 124, 12116–12140, doi:10.1029/2019JB018242.
- Deng, F., Rodgers, M., **Xie, S.**, Dixon, T.H., Charbonnier, S., Gallant, E.A., López Velez, C.M., Ordoñez, M., Malservisi, R., Voss, N.K., Richardson, J.A. (2019). High-resolution DEM generation from multiple remote sensing data sources for improved volcano hazard assessment – a case study at Nevado del Ruiz, Colombia. *Remote Sensing of Environment*, 233, 111348, doi:10.1016/j.rse.2019.111348.
- Xie, S.**, Dixon, T.H., Holland, D.M., Voytenko, D., Vaňková, I. (2019). Rapid iceberg calving following removal of tightly packed pro-glacial mélange. *Nature Communications*, 10, 3250, doi:10.1038/s41467-019-10908-4.
- Xie, S.**, Gallant, E., Wetmore, P.H., Figueiredo, P.M., Owen, L.A., Rasmussen, C., Malservisi, R., Dixon, T.H. (2019). A new geological slip rate estimate for the Calico Fault, eastern California: Implications for geodetic versus geologic rate estimates in the Eastern California Shear Zone. *International Geology Review*, 61(13), 1613–1641, doi:10.1080/00206814.2018.1531272.
- Vaňková, I., Voytenko, D., Nicholls, K.W., **Xie, S.**, Parizek, B.R., Holland, D.M. (2018). Vertical structure of diurnal englacial hydrology cycle at Helheim Glacier, East Greenland. *Geophysical Research Letters*, 45, 8352–8362, doi:10.1029/2018GL077869.
- Dixon, T.H., **Xie, S.** (2018). A kinematic model for the evolution of the Eastern California Shear Zone and Garlock Fault, Mojave Desert, California. *Earth and Planetary Science Letters*, 494, 60–68, doi:10.1016/j.epsl.2018.04.050.
- Xie, S.**, Dixon, T.H., Voytenko, D., Deng, F., Holland, D.M. (2018). Grounding line migration through the calving season at Jakobshavn Isbræ, Greenland, observed with terrestrial radar interferometry. *The Cryosphere*, 12(4), 1387–1400, doi:10.5194/tc-12-1387-2018.
- Xie, S.**, Dixon, T.H., Voytenko, D., Holland, D.M., Holland, D., Zheng, T. (2016). Precursor motion to iceberg calving at Jakobshavn Isbræ, Greenland, observed with terrestrial radar interferometry. *Journal of Glaciology*, 62(236), 1134–1142, doi:10.1017/jog.2016.104. (**issue front cover**)
- Xie, S.**, Li, F., Zhao, J., Zhang, S. (2014). Estimation of sea ice thickness at Zhongshan station in Antarctica based on a combination of GPS and tide observations. *Geomatics and Information Science of Wuhan University*, 39(10), 1153–1157, doi:10.13203/j.whugis20130048.

Others

- Xie, S.** (2020). Shallow water seafloor geodesy: GPS on an anchored spar buoy. *Ph.D. Diss., University of South Florida, Tampa*, <https://search.proquest.com/docview/2390173379?pq-origsite=gscholar>.
- Xie, S.** (2019). Calling: Earth #013 - Surui Xie, Geodesist. *Calling: Earth*, 14. https://scholarcommons.usf.edu/geo_podcasts/14.

PRESENTATIONS

- Xie, S.**, Dixon, T.H., Holland, D.M., Voytenko, D., Vaňková, I. (2018). Rapid iceberg calving following removal of tightly packed pro-glacial mélange at Jakobshavn Isbræ, Greenland. Fall Meeting of the American Geophysical Union, Washington, D.C., USA. (**Poster**)
- Figueiredo, P., Rasmussen, C., **Xie, S.**, Wetmore, P.H., Owen, L.A., Dixon, T.H. (2018). Geological slip rate estimate for the Calico Fault at Newberry Springs, California: new age constraints from optically stimulated luminescence dating. Fall Meeting of the American Geophysical Union, Washington, D.C., USA. (**Poster, presenting author**)
- Xie, S.**, Dixon, T.H., Voytenko, D., Deng, F., Holland, D.M., Holland, D. (2017). Ice speed variation driven by tidal currents near the terminus of Jakobshavn Isbræ, Greenland, observed with terrestrial radar interferometry. Fall Meeting of the American Geophysical Union, New Orleans, LA, USA. (**Poster**)
- Dixon, T.H., **Xie, S.**, Malservisi, R., Lembke, C., Iannaccone, G., Law, J., Rodgers, M., Russel, R., Voss, N. (2017). Measurement of shallow water sea floor motion with GPS on a rigid buoy: system design and preliminary analysis. Fall Meeting of the American Geophysical Union, New Orleans, LA, USA. (**Poster, presenting author**)
- Wetmore, P.H., **Xie, S.**, Gallant, E., Owen, L.A., Dixon, T.H. (2017). A new geological slip rate estimate for the Calico fault, Eastern California: Implications for geodetic versus geologic rate estimates in the Eastern California shear zone. Fall Meeting of the American Geophysical Union, New Orleans, LA, USA. (**Poster, presenting author**)
- Xie, S.**, Wetmore, P.H., Owen, L.A., Gallant, E., Dixon, T.H. (2016). Evidence for a high slip rate of the Calico fault in the Eastern California Shear Zone. Fall Meeting of the American Geophysical Union, San Francisco, CA, USA. (**Oral**)
- Xie, S.**, Dixon, T.H., Voytenko, D., Holland, D.M., Holland, D., Zheng, T. (2016). Precursor motion to iceberg calving at Jakobshavn Isbræ, Greenland, observed with terrestrial radar interferometry. International Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, La Jolla, CA, USA. (**Oral**)
- Xie, S.**, Voytenko, D., Holland, D.M., Dixon, T.H. (2015). Calving and velocity variations observed by Terrestrial Radar Interferometry at Jakobshavn Isbræ, Greenland, in 2015. Fall Meeting of the American Geophysical Union, San Francisco, CA, USA. (**Poster**)