Surui Xie Oct 2018

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4202 E. Fowler Ave, Tampa, FL 33620, USA

Research Interests Space and terrestrial geodesy, fault slip rate, tidewater glacier dynamics.

EDUCATION

University of South Florida, Tampa, Florida, USA

Ph.D. Student, Geology, Aug 2014 -

• Advisor: Timothy H. Dixon, Rocco Malservisi (co-advisor)

Wuhan University, Wuhan, Hubei, China

M.E., Geodesy and Survey Engineering, June, 2014

• Thesis: Current crustal movements in Antarctica from GPS measurements

• Advisor: Fei Li

B.E. (Outstanding graduate), Geodesy and Geomatics Engineering, June, 2011

• Thesis: Orbit integrator design for a Martian probe

• Advisor: Fei Li

AWARDS

Tharp Endowed Scholarship, University of South Florida, 2015–2017.

Travel grant to attend 2016 IGS Symposium, La Jolla, CA, USA, 2016.

Travel award to attend GAMIT/GLOBK/TRACK Short Course at UNAVCO HQ, Boulder, CO, USA, 2015.

Chinese National Scholarship, 2009

Research EXPERIENCE Quaternary Geochronology Laboratories at the University of Cincinnati, Cincinnati, Ohio, USA

Visiting Student

Summer 2015, Summer 2016

Terrestrial cosmogenic nuclide exposure dating.

The 28th Chinese National Antarctic Research Expedition, Zhongshan Station, Antarctica

GeodesistNov, 2011 - Jan, 2013

Geodetic surveying and mapping, tide gauge calibration and maintenance.

FIELD WORK

Geological field investigations in the Mojave Desert of the Eastern California Shear Zone (2018, 2016). Mountain glacier studies at Gangotri of the west Himalayas (2016). 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).

Teaching EXPERIENCE TA for History of Life

TA for Dyn Earth: Intro to Phys Geol TA for Introduction to Earth Science

TA for Geology For Engineers

Spring 2016 – Spring 2017

Fall 2015 Spring 2015

Fall 2014

Computer Skills

- Programming languages: Python, Fortran, C++, Matlab, Shell
- Software packages: GMT, GAMIT/GLOBK/TRACK, GIMP, Gnuplot, IATFX, QGIS

LANGUAGES

Chinese (native), English (fluent)

PEER-REVIEWED
ARTICLES

(More info on **G**oogle Scholar)

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., (in revision). High-resolution DEM generation from multiple remote sensing data sources for improved volcano hazard assessment – a case study at Nevado del Ruiz, Colombia.

Xie, S., Dixon, T.H., Holland, D.M., Voytenko, D., Vaňková, I., (in revision). Rapid iceberg calving following removal of tightly packed pro-glacial mélange.

Xie, S., Galliant, E., Wetmore, P.W., Figueiredo, P.M., Owen, L.A., Rasmussen, C., Malservisi, R., Dixon, T.H., (accepted). 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*, 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.

Lei, J., Li, F., Zhang, S., Xiao, C., Xie, S., Ke, H., Zhang, Q., Li, W., 2018. Ocean Tides Observed from A GPS Receiver on Floating Sea Ice Near Chinese Zhongshan Station, Antarctica. *Marine Geodesy*, 41(4), 353–367, doi:10.1080/01490419.2018.1454370.

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. (front cover article)

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. (in Chinese with English abstract) Wuhan Daxue Xuebao (Xinxi Kexue Ban)/Geomatics and Information Science of Wuhan University, 39(10), 1153–1157, doi:10.13203/j.whugis20130048.

SELECTED PRESENTATIONS

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)

- 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**)
- Xie, S., Galliant, E., Wetmore, P., 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. GSA Annual Meeting, Seattle, WA, USA. doi:10.1130/abs/2017 AM-300595. (Oral)
- 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)