YUJIE ZHENG

Curriculum Vitae

Division of Geological and
Planetary Sciences
Seismological Laboratory
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EDUCATION

Stanford University, Stanford, CA

Ph.D., Geophysics, January 2020

- Thesis title: Imaging Cascadia slow slip events with modern interferometric synthetic aperture radar datasets
- Committee: Howard Zebker (principal advisor), Paul Segall, Eric Dunham, Dustin Schroeder

Peking University, Beijing, China

Bachelor of Science in Geophysics, July 2014
Bachelor of Economics, July 2014

EMPLOYMENT AND RESEARCH EXPERIENCE

Postdoctoral Scholar, California Institute of Technology	2019 – present
Research Assistant, Stanford University	2014 – 2019
Undergraduate Research Assistant, Peking University	2012 – 2014

PEER-REVIEWED PUBLICATIONS

In preparation:

[10] **Zheng, Y.** and Zebker, H.A., Investigating Cascadia slow slip and inter-seismic deformation with Interferometric Synthetic Aperture radar, in prep

Under Review:

[9] **Zheng, Y.**, Laura Blackstone and Segall, P., (2021), Constraints on absolute magma chamber volume from geodetic measurements: Trapdoor faulting in the Galapagos. Under review, *Geophysical Research Letters,* https://doi.org/10.1002/essoar.10508257.1

[8] **Zheng, Y.**, Fattahi, H., Agram, P., Simons, M., and Rosen, P., (2021), On closure phase and Systematic Bias in Multi-looked SAR Interferometry. In Revision, *IEEE Transactions on Geoscience and Remote Sensing*

Published:

[7] Wang, T., **Zheng, Y.**, Pulvirenti, F., Segall, P., (2021). Post-2018 caldera collapse re inflation uniquely constrain Kilauea's magmatic system, *Journal of Geophysical Research: Solid Earth*, https://doi.org/10.1029/2021JB021803

- AGU Eos research spotlight: Volcanic Tremor and Deformation at Kilauea

[6] **Zheng, Y.**, Zebker, H.A., and Michaeledes, R.J., (2021). A New Decorrelation Phase Covariance Model for Noise Reduction in Unwrapped Interferometric Phase Stacks, *IEEE Transactions on Geoscience and Remote Sensing,* https://doi.org/10.1109/TGRS.2021.3050087

[5] **Zheng, Y.**, Zebker, H.A., and Michaeledes, R.J., (2020) "A Physics-Based Decorrelation Phase Covariance Model for Effective Decorrelation Noise Reduction in Interferogram Stacks," *2020 IEEE International Geoscience and Remote Sensing Symposium*, http://doi.org/10.1109/IGARSS39084.2020.9323237

[4] Michaelides, R.J., Zebker, H.A., **Zheng, Y.,** (2019). An Algorithm for Estimating and Correcting Decorrelation Phase from InSAR Data Using Closure Phase Triplets. *IEEE Transactions on Geoscience and Remote Sensing*, http://doi.org/10.1109/TGRS.2019.2934362

[3] **Zheng, Y.** and Zebker, H.A., (2017). Phase Correction of Single-Look Complex Radar Images for User-Friendly Efficient Interferogram Formation. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10(6), http://doi.org/10.1109/JSTARS.2017.2697861

[2] Zebker, H.A. and **Zheng, Y.** (2016), Robust and efficient InSAR deformation time series processing, *2016 IEEE International Geoscience and Remote Sensing Symposium*, http://doi.org/10.1109/IGARSS.2016.7729827

[1] **Zheng, Y.** and Zhou, S., (2014). The spatiotemporal variation of the b-value and its tectonic implications in North China. *Earthquake Science*, https://doi.org/10.1007/s11589-014-0086-8

INVITED TALKS

April 2022	**NISAR Community Science Workshop** (expected)
Dec 2021	**Midwestern State University**, Department seminar
Nov 2021	**SCEC Community Geodetic Model Workshop**
Oct 2021	**Southern Methodist University**, Radar Lab guest lecture
Nov 2020	**Caltech Institute of Technology**, Seismology lab seminar
Oct 2018	**University of California, Berkeley**, Active tectonic group seminar

SELECTED CONFERENCE PRESENTATIONS

**ORAL PRESENTATION **INVITED*

Apr 2022	****Zheng, Y.,** Fattahi, H., Agram, P., Simons, M., On Closure phase and Systematic Bias in Multi-looked SAR Interferometry. *EUSAR Conference (expected)*
Dec 2021	***Zheng, Y.**, Fattahi, H., Agram, P., Simons, M., On Closure phase and Systematic Bias in Multi-looked SAR Interferometry. *AGU Fall Meeting*.
Dec 2021	***Zheng, Y.**, Simons, M., Investigating land surface displacements over the San Gabriel Valley, California. *AGU Fall Meeting*.
Jun 2021	***Zheng, Y.**, Fattahi, H., Agram, P., Simons, M., On Closure phase and Systematic Bias in Multi-looked SAR Interferometry. *Fringe Workshop*
Dec 2020	**Zheng, Y.**, Fattahi, H., Agram, P., Simons, M., Assessing closure phase and its impact on InSAR time-series. *AGU Fall Meeting.*
Sep 2020	***Zheng, Y.**, Zebker, H.A. and Michaelides, RJ.,. A Physics-Based Decorrelation Phase Covariance Model for Effective Decorrelation Noise Reduction in Interferogram Stacks. *IEEE International Geoscience and Remote Sensing Symposium.*
Dec 2019	***Zheng, Y**. and Zebker, H.A., Are redundant interferograms really redundant? On the use of redundant interferograms to reduce noise. *AGU Fall Meeting.*

Dec 2018 **Zheng, Y.** and Zebker, H.A., Slow Slip Events in Cascadia: Observation from Sentinel-1. *AGU Fall Meeting.*

Dec 2017 ***Zheng, Y.**, and Zebker, H.A., Retrieving Ground Deformation Associated with Cascadia Slow Slip Events Using Sentinel-1 Data. *AGU Fall Meeting.*

Dec 2016 **Zheng, Y.** and Zebker, H.A., Crustal deformation associated with Cascadia slow slip events from InSAR time-series, *AGU Fall Meeting*

Jul 2014 **Zheng, Y.** and Zhou, S., The spatiotemporal variation of the b-value and its tectonic implications in North China, *International Workshop on Statistical Seismology*

FELLOWSHIPS AND AWARDS

2017 American Geophysics Union Outstanding Student Paper Award – Geodesy session

2014 The Joshua L. Soske Fellowship, School of Earth Sciences, Stanford University

2012 Peking University Principle's Award for undergraduate research

2012 Chinese Universities Study Award, National University of Singapore

2010 The May 4th Fellowship, Peking University

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant, Stanford University

- GP90/ESS113 Earthquakes and Volcanoes, upper-level undergraduate course
- EE60N/GP60N Man versus Nature: Coping with Disasters Using Space Technology, Introductory Seminar for first-year undergraduate students.
- EE355/GP265 Imaging Radar and Applications, advanced graduate course

Mentor, 2021-2022 Clean Water Science Network (CWSN) Mentorship Program

- Ongoing participation, mentoring undergraduate students from Latin America

MEMBERSHIPS AND SERVICE

Membership	American Geophysical Union (2014 - present)
	Institute of Electrical and Electronics Engineers (IEEE) (2016 - present)
Reviewer	Nature Communications
	IEEE Transactions on Geoscience and Remote Sensing
	IEEE Transactions on Parallel and Distributed Systems
	Remote Sensing in Earth System Science
	IEEE International Geoscience & Remote Sensing Symposium
	Scientific Committee (2016 - present)
	NASA Experimental Program to Stimulate Competitive Research (EPSCoR 2017) research proposal online reviewer