

# YUJIE ZHENG

## Curriculum Vitae

Division of Geological and  
Planetary Sciences  
Seismological Laboratory  
California Institute of Technology  
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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

**Published:**

- [9] **Zheng, Y.**, Fattahi, H., Agram, P., Simons, M., and Rosen, P., (2022), On closure phase and Systematic Bias in Multi-looked SAR Interferometry. *IEEE Transactions on Geoscience and Remote Sensing*, <http://doi.org/10.1109/TGRS.2022.3167648>
- [8] **Zheng, Y.**, Laura Blackstone and Segall, P., (2022), Constraints on absolute magma chamber volume from geodetic measurements of Trapdoor faulting in the Galapagos. *Geophysical Research Letters*, <https://doi.org/10.1029/2021GL095683>
- [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 Michaelides, 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 Michaelides, 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**

Aug 2022	<b>NISAR Community Science Workshop</b> (expected)
April 2022	<b>Ohio State University</b> , Department seminar
March 2022	<b>The University of Hong Kong</b> , Department seminar
March 2022	<b>University of Texas, Dallas</b> , Department seminar
Jan 2022	<b>Indiana University</b> , Department seminar
Dec 2021	<b>Midwestern State University</b> , Department seminar
Nov 2021	<b>SCEC Community Geodetic Model Workshop</b>
Oct 2021	<b>Southern Methodist University</b> , Radar Lab guest lecture
Nov 2020	<b>Caltech Institute of Technology</b> , Seismology lab seminar
Oct 2018	<b>University of California, Berkeley</b> , Active tectonic group seminar

## **SELECTED CONFERENCE PRESENTATIONS**

\**ORAL PRESENTATION* \*\**INVITED*

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

- 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) <i>NASA Experimental Program to Stimulate Competitive Research (EPSCoR 2017)</i> research proposal online reviewer