**Dr. Estelle Chaussard** *echaussard@gmail.com & https://estellechaussard.com*

# Curriculum Vitae

**SUMMARY in NUMBERS**

- 5 awards
- 26 published peer reviewed papers, 17 as first author
- 1,400+ citations
- 4 peer reviewed book chapters + 1 solicited book (in progress)
- 1.5 Million $ of total funding, including 1 NSF CAREER grant
- 17 sessions of 8 different classes taught
- 3 new classes created from scratch + 2 classes taught remotely
- 8 advised/co-advised graduate students
- 30 invited talks worldwide + 39 conference presentations
- 5 Editor/Associate Editorship responsibilities + 3 convened conference sessions
- Reviewer of 15-20 publications/proposals per year
- Participation in 10 committees, including as an elected member of the UNAVCO Board of Directors & as the twice-elected WInSAR Vice-Chair

## RESEARCH INTERESTS

Development and usage of **space geodetic techniques** to detect small movements of the Earth's surface and define the risks associated. Improve understanding of the physical processes associated with **geohazards** and usage of natural **resources**. Specialties: Geophysics, Remote Sensing, Geomorphology, Volcanology, Hydrology, and Active Tectonic.

## EDUCATION

2013 U. of Miami, Miami, FL
Ph.D. in Geology & Geophysics: *Characterization of volcanic and land subsidence hazards at regional scales: contributions from space geodesy*

2008 U. of Montpellier II, Montpellier (France)
M.Sc. in Earth Sciences, *magna cum laude*

2006 U. of Montpellier II, Montpellier (France)
B.Sc. in Earth Sciences, *summa cum laude*

2005 U. of Burgundy, Dijon (France)
B.Sc. in Biology, *magna cum laude*

## PROFESSIONAL EXPERIENCE

2019–2021 Assistant Professor, Dept. of Earth Sciences, U. of Oregon
2015–2018 Assistant Professor, Dept. of Geology, U. at Buffalo
2013–2015 Postdoctoral investigator, U. of California, Berkeley
2011–2013 NASA Earth and Space Science Graduate Fellow, U. of Miami
2008–2011 Graduate Research Assistant, U. of Miami
2006–2008 Graduate Research Assistant, U. of Montpellier II (France)

## AWARDS

- 2019 Outstanding Reviewer for *Environmental Research Communications*
- 2016 SUNY Buffalo Julian Park Award *for New Faculty Publication*
- 2014 International KACST-KAUST-JCCP workshop *Presenter Award*
- 2012 American Geophysical Union *Outstanding Student Paper Award*
- 2012 National Science Foundation Cities on Volcanoes *Student Award*

## PEER-REVIEWED WORK

### Peer-reviewed books and book chapters

***In preparation***

Chaussard E. Single Editor of Solicited Book: Remote sensing applications to geohazards and natural resources, *Springer*. 31 chapters, *approx. 460p.*

***Accepted***

Barnhart, W.D. and Chaussard, E. (Accepted) The Seismic Cycle: From Observations to Models of Fault Slip, in *Remote sensing applications to geohazards and natural resources*, ed. by Chaussard E., Springer, expected Fall 2021.

Chen, J. and Chaussard, E. (Accepted) Remote sensing for tracking groundwater resources in *Remote sensing applications to geohazards and natural resources*, ed. by Chaussard E., Springer, expected Fall 2021.

Fu, Y., Thomas, B.F. and Chaussard, E. (Accepted) Large-Scale Terrestrial Water Storage Changes Sensed by Geodesy in *Remote sensing applications to geohazards and natural resources*, ed. by Chaussard E., Springer, expected Fall 2021.

Vellico, M., and Chaussard, E. (Accepted) Carbon Capture and storage in *Remote sensing applications to geohazards and natural resources*, ed. by Chaussard E., Springer, expected Fall 2021.

### Peer-reviewed papers

*h-index: 16/ i10-index: 21/ citations: 1474- Publications #1-7= PhD; #8-13 = postdoc*
***Student first-author under direct advising  *Collaboration with student first-author*

***In Review***

Mirzadeh, S.* M. J., Jin, S., Parizi, E., Chaussard, E., Bürgmann, R., Delgado Blasco, J. M., Amani, M., Bao, H.and Mirzadeh, S. H. Characterization of Irreversible Land Subsidence in the Yazd-Ardakan Plain, Iran from 2003-2020 InSAR Time Series.

***Published***

26. Chaussard, E., Havazli, E., Fattahi, H., Cabral-Cano, E., & Solano-Rojas, D. (2021). Over a century of sinking in mexico city: No hope for significant elevation and storage capacity recovery. *JGR-Solid Earth*, 126, e2020JB020648. https://doi.org/10.1029/2020JB020648

25. Hoyt, A.**, Chaussard E., Seppalainen, S.S., Harvey, C.F., (2020). Widespread Subsidence and Carbon Emissions across Southeast Asian Peatlands. *Nature Geoscience*, 13, 435–440. https://doi.org/10.1038/s41561-020-0575-4

24. Chaussard, E., & Farr, T. G., (2019). A new method for isolating elastic from inelastic deformation in aquifer systems: Application to the San Joaquin Valley, CA. *Geophysical Research Letters*, *46*, 10800– 10809. https://doi.org/10.1029/2019GL084418

23. Schaefer, L.N.*, Di Traglia, F., Chaussard, E., Lu, Z., Nolesini, T., Casagli N., (2019). Monitoring volcano slope instability with Synthetic Aperture Radar: A review and new data from Pacaya (Guatemala) and Stromboli (Italy) volcanoes. *Earth-science reviews, 192,* pp236-257, https://doi.org/10.1016/j.earscirev.2019.03.009

22. Xu, W.*, Wu, S., Materna, K., Nadeau, R., Floyd, M., Funning, G., Chaussard, E., Johnson, C.W., Murray, J.R., Ding, X. and Bürgmann, R. (2018), Interseismic ground deformation and fault slip rates in the greater San Francisco Bay Area from two decades of space geodetic data, *JGR-Solid Earth, 123*(9), 8095-8109, doi: 10.1029/2018JB016004

21. Cohen-Waeber, J.**, Burgmann, R., Chaussard, E., Giannico, C., and Ferretti, A. (2018), Spatiotemporal Patterns of Precipitation-Modulated Landslide Deformation from Independent Component Analysis of InSAR Time Series, *Geophysical research Letters, 64*(1), 70, doi:10.1016/j.enggeo.2014.03.003

20. Castellazzi, P.*, Longuevergne, L., Martel., R., Rivera, A., Brouard, C., Chaussard, E., Garfias, J. (2018) Combining GRACE and InSAR for quantitative mapping of groundwater depletion at the water management scale, *Rem. Sens. Env., 205*, 408–418, doi:10.1016/j.rse.2017.11.025

19. Zhan, Y.*, Gregg, P.M., Chaussard, E., and Aoki., Y. (2017) Sequential assimilation of volcanic monitoring data to quantify eruption potential: application to Kerinci volcano, Sumatra. *Front. Earth Sci. 5*:108. doi: 10.3389/feart.2017.00108

18. Chaussard, E., Milillo P., Bürgmann R., Perissin D., Fielding E. J. & Baker B., (2017). Remote sensing of ground deformation for monitoring groundwater management practices: application to the Santa Clara Valley during the 2012-2015 California drought. *Journal of Geophysical Research, 122,* 8566-8582. doi.org/10.1002/2017JB014676

17. Chaussard, E., (2017). A low-cost method applicable worldwide for remotely mapping lava dome growth. *J. Volcan. geotherm. Res. 341, 33-4,* doi.org/10.1016/j.jvolgeores.2017.05.017

16. Castellazzi, P.*, Martel, R., Rivera, A., Huang, J., Pavlic, G., Calderhead, A. I., Chaussard, E., Garfias, J., and Salas, J., (2016), Groundwater depletion in Central Mexico: Use of GRACE and InSAR to support water resources management, *Water Resources Res., 52, (8), 5985-6003.*

15. Chaussard, E., (2016) Subsidence in the Parícutin lava field: causes and implications for interpretation of deformation fields at volcanoes. *J. Volcan. geotherm. Res., 320,* 1-11.

14. Chaussard, E., Kerosky, S.** (2016) Characterization of Black Sand Mining Activities and Their Environmental Impacts in the Philippines Using Remote Sensing. *Remote Sensing*, *8*(2), 100; doi:10.3390/rs8020100

13. Chaussard, E., Johnson, C.W., Fattahi, H., and Bürgmann, R., (2016) Potential and limits of InSAR to characterize interseismic deformation independently of GPS data: application to the southern San Andreas Fault system. *G-cubed, 17,* doi:10.1002/2015GC006246

12. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C. W., Nadeau, R., Taira, T., and Johanson, I., (2015) Interseismic coupling and refined earthquake potential on the Hayward-Calaveras fault zone, *J. of Geophysical Research, 120*, doi:10.1002/2015JB012230

11. Chaussard, E., Bürgmann R., Fattahi, H., Nadeau, R., Taira, T., Johnson, C.W., and Johanson, I., (2015) Potential for larger earthquakes in the East San Francisco Bay Area due to the direct connection between the Hayward & Calaveras Faults, *Geophys. Res. Lett., 42*, doi: 10.1002/2015GL063575

10. Fattahi, H.*, Amelung, F., Chaussard, E., Wdowinski, S., (2015) Coseismic and postseismic deformation due to the 2007 M5.5 Ghazaband fault earthquake, Balochistan, Pakistan. *Geophys. Res. Lett., 42*, doi:10.1002/2015GL063686

9. Cabral-Cano, E., Solano-Rojas, D., Oliver-Cabrera, T., Wdowinski, S., Chaussard, E., et al. (2015) Satellite geodesy tools for ground subsidence and associated shallow faulting hazard assessment in central Mexico, *Proc. of the Int. Assoc. of Hydro. Sc., 372*, doi:10.5194/piahs-372-255-2015

8. Chaussard, E., Bürgmann, R., Shirzaei, M., Fielding, E.J., and Baker, B., (2014) Predictability of hydraulic head changes and basin-wide aquifer system and fault characterization from InSAR-derived ground deformation. *J. of Geophysical Research, 119*, 6572–6590, doi: 10.1002/2014JB011266

7. Chaussard, E., and Amelung, F., (2014) Regional controls on magma ascent and storage in volcanic arcs. *G-cubed, 15*, doi:10.1002/2013GC005216

6. Chaussard, E., Wdowinski, S., Cabral E., and Amelung, F., (2014). Land subsidence in central Mexico detected by ALOS InSAR time-series, *Rem. Sens. of Env., 140*, 94–106

5. Chaussard, E., Amelung, F., Abidin, H., & Hong, S.-H., (2013) Sinking cities in Indonesia: ALOS PALSAR detects rapid subsidence due to groundwater and gas extraction. *Remote Sensing of Environment, 128*, 21, 150-161, doi:10.1016/j.rse.2012.10.015

4. Chaussard, E., and Amelung F., (2013) Characterization of Geological Hazards Using a Globally Observing Spaceborne SAR. *Photogram. Eng. & Rem. Sens., 79*, 11, 982-986

3. Chaussard, E., Amelung, F., and Aoki, Y., (2013) Characterization of closed and open volcanic systems in Indonesia and Mexico using InSAR time-series. *J. of Geophysical Research, 118*, doi:10.1002/jgrb.50288

2. Chaussard, E., & Amelung F., (2012) Precursory inflation of shallow magma reservoirs at west Sunda volcanoes detected by InSAR. *Geophys. Res. Lett., 39,* 21, doi: 10.1029/2012GL053817

1. Chaussard, E., Amelung, F., and Abidin, H., (2012) Sinking cities in Indonesia: space-geodetic evidences of the rates and spatial distribution of land subsidence. *Proceedings of the FRINGE 2011 Workshop*, Frascati, Italy (ESA SP-696)

## REPORTS and WHITE PAPERS

7. Chaussard, E., et al. (2020) NSF Whitepaper: InSAR in a Future Geophysical Facility.

6. Stamps, D.S., et al. (2020) NSF Whitepaper: An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Instrumentation Services Needs.

5. Ford, H.A., et al. (2020) NSF Whitepaper: An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Data Services Needs.

4. Evans, E.L., et al. (2020) NSF Whitepaper: An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Education, Workforce, and Outreach Needs.

3. Chaussard, E., (2019) Research Frontiers in Characterizing Groundwater Aquifers; National Academies of Sciences, Engineering, and Medicine. 2019. *Groundwater Recharge and Flow: Approaches and Challenges for Monitoring and Modeling Using Remotely Sensed Dat*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25615.

2. Aster, R., Simons, M., Burgmann, R., Gomez, N., Hammond, B., Holbrook, S., Chaussard, E., Stearns, L., Egbert, G., Hole, J. and Lay, T., Future geophysical facilities required to address grand challenges in the earth sciences (2015). *National Science Foundation, 52 p.*

1. Chaussard, E., (2013) Characterization of volcanic and land subsidence hazards at regional scales: contributions from space geodesy. *Ph.D. Dissertation, U. of Miami*

## FUNDING and GRANTS

**Selected -** total grant funding: $1,539,334

NSF CAREER Geomorphology and Land-use Dynamics: PI, Peatland Geomorphology: Quantifying Geomorphological Changes across Southeast Asia Peatlands. 5 years, total cost of $636,991 (2021).

U. of Oregon Resilience Initiative Funding: co-PI, $48,650. An Innovative Collaborative Research Network Focused on the Human Dimension of Environmental Change in SE Asia (2019).

U. of Oregon, Early Career Faculty Grant: PI, $5,000 Spatial extent and trajectory of subsidence and CO2 emissions across southeast Asia peatlands (2019).

NASA Earth Surface and Interior NNH18ZDA001N-ESI A.24 – 18-ESI18-0058: PI, $494,037, Using 25 years of deformation due to groundwater extraction in the Central Valley to characterize time-dependent aquifer properties and quantify the associated stress change on faults (2019-2022)

USGS Earthquake Hazards Program – G16AP00007: PI, $169,474, Interseismic coupling of the north San Francisco Bay faults from InSAR, GPS, and seismic data: collaborative research with UC Berkeley and USGS Menlo Park (2016 -2018)

U. at Buffalo, RENEW Seed grant: PI, $30,182, Towards improving the sustainability of urban infrastructures and groundwater usage in growing cities (2017-2018)

U. at Buffalo, Vice President for Research and Economic Development (OVPRED): PI, $150,000, Towards InSAR everywhere all the time (2017)

U. of California Berkeley Center for Effective Global Action (CEGA) Award: PI, $5,000, Remote Sensing of Illegal Black Sand Mining in the Philippines (2014-2015)

NASA - Earth and Space Science Fellowship (NESSF): PI, Ph.D. Fellowship. Testing hypotheses about the depth of magma chambers in volcanic arcs using ALOS PALSAR (2011 -2014).

## TEACHING and MENTORING

### Courses taught

Undergraduate

- Earth Surface and Environment (ERTH 202) U. of Oregon, **remote class and labs**
  Spring 2020 (Remote)
- Geology for Engineers (GLY-103), School of Engineering, Buffalo, **new & service class**
  Spring 2018, Spring 2017
- Natural hazards past, present & future (GLY-198), U. at Buffalo, **new & service class**
  Spring 2018, Spring 2017, Fall 2016
- Field Camp (GLY-407), U. at Buffalo
  Summer 2018, Summer 2016
- Physical Oceanography, U. of Miami, Teaching Assistant
  Fall 2010, Fall 2009

Graduate

- Monitoring the Earth (ERTH-410/510), U. of Oregon, **new, taught in person and online**
  Fall 2020 (Remote), Winter 2019
- Geological Hazards and Risks (GLY-428/528), U. at Buffalo
  Spring 2017, Spring 2016
- Scientific writing and communication, U. of Miami, **new class**
  Spring 2013

### Graduate thesis advisor and co-advisor

| | | | |
|---|---|---|---|
| Rebecca Bussard | PhD candidate | (comps. passed Feb 2021) | U. of Oregon |
| Renee Nassif | PhD candidate | (comps. passed Feb 2021) | U. of Oregon |
| Julien Cohen-Waeber | PhD completed | U.C. Berkeley, 2018 | Now a Managing Engineer |
| Allison Hoyt | PhD completed | MIT, 2017 | Now an Asst. Prof. at Stanford |
| Sara Kerosky | PhD completed | U.C. San Diego, 2018 | Now a postdoc at Montana St. |
| Erin Girven | MSc completed | U. at Buffalo, 2017–2019 | Now a Federal employee |
| Jennifer Cramer | MSc completed | U. at Buffalo, 2016–2018 | Now at the USGS |
| Erika Dohring | MSc completed | U. at Buffalo, 2015–2017 | Now a Senior Geologist |

### Postdoc advising/co-advising

| | | |
|---|---|---|
| Wenbin Zu | UC Berkley 2018-2020 | Now and Asst. prof. at Hong Kong Polytechnic U. |

### Graduate thesis committee member (*=reporter)

| | | | |
|---|---|---|---|
| Annika Dechert | PhD, U. of Oregon | 2020–2021 | |
| David Small* | PhD, U. of Oregon | 2020–2021 | |
| Lissie Connors* | PhD, U. of Oregon | 2020–2021 | |
| Nicole Abib | PhD, U. of Oregon | 2020–2021 | |
| PJ Zrelak | MSc, U. of Oregon | 2020–2021 | |
| Sage Kemmerlin | MSc, U. of Oregon | 2017–2021 | |
| Andrew Harp* | PhD, U. at Buffalo | 2014–2018 | Now a Lecturer at California State U., Chico |
| Radhika Sangani* | MSc, U. at Buffalo | 2014–2017 | Now a Geophysicist at Borehole Seismic LLC |
| Christian Venturino* | MSc, U. at Buffalo | 2014–2016 | Now a Geologist at PanGEO, Inc. |

### Undergraduate research advising

| | | | |
|---|---|---|---|
| Chelbi Cook | U. of Oregon | 2020–2021 | |
| Sara Koff | U. of Oregon | 2020–2021 | |
| Ali Villanueva | U. of Oregon | 2019–2020 | |
| Vincent Sassard | U. of Oregon | 2019–2020 | Now MS student at Utrecht University |

## PRESENTATIONS

### Invited talks

**2021**

32. Chaussard, E. Improving resilience in the face of natural hazards and depletion of natural resources, *ISTerre Grenoble, France* (Remote).

31. Chaussard, E., Havazli. E., Fattahi, H., Crabral-Cano, E. & Solanos D. Over a Century of Sinking in Mexico City: No Hope for Significant Elevation and Storage Capacity Recovery, *Université de Lyon, France* (Remote)

**2020**

30. Chaussard, E., Havazli. E., Fattahi, H., Crabral-Cano, E. Over a Century of Sinking in Mexico City: No Hope for Elevation, Water Levels, and Water Quality Recovery, *ISTerre Grenoble, France* (Remote)

29. Hoyt, A.*, Chaussard, E., Seppalainen, S. S., Harvey, C. Widespread Drainage, Subsidence and $CO_2$ Emissions in Tropical Peatlands. *AGU Fall meeting* (Remote)

28. Chaussard, E., Havazli. E., Fattahi, H., Crabral-Cano, E. Over a Century of Sinking in Mexico City: No Hope for Elevation, Water Levels, and Water Quality Recovery, *Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, UC San Diego, San Diego, CA* (Remote)

27. Chaussard, E., For Peat's Sake! improving our understanding of tropical peatlands' dynamic through integration of remote sensing data, *San Jose State University, San Jose, CA* (Remote)

**2019**

26. Chaussard, E., Widespread Subsidence and Carbon Emissions across Southeast Asian Peatlands, *Caltech, Pasadena, CA.*

25. Chaussard, E., InSAR: measuring ground deformation from space for hydrology, *National Academies of Sciences* Workshop on Groundwater Recharge and Flow: Approaches and Challenges for Monitoring and Modeling using Remotely Sensed Data, *Washington DC.*

24. Chaussard, E., From groundwater monitoring to characterization of aquifer system properties and evaluation of management practices, *Jet propulsion Laboratory, Pasadena, CA.*

23. Chaussard, E., Towards Global Assessment of Geohazards, *Jet propulsion Laboratory, Pasadena.*

22. Chaussard, E., From Monitoring Land Subsidence to Managing Groundwater Resources from Space, *Oregon State University, Department of Geology, Corvallis, OR.*

21. Chaussard, E., From Monitoring Land Subsidence to Managing Groundwater Resources from Space, *Portland State University, Department of Geology, Portland, OR.*

**2018**

20. Chaussard, E., Tiampo, K. Extracting signal from noise in Big Data. *Grand Challenges in Geodesy workshop, Michigan State University, East Lansing, MI*.

19. Chaussard, E., Bridging Earth Systems Sciences: from characterization of geohazards to estimation of $CO_2$ emissions across peatlands of SE Asia, *Buffalo Association of Professional Geologists, Buffalo.*

**2017**

18. Chaussard, E., Towards Global Assessment of Geohazards and Natural Resources, *Carnegie Institution for Science, Washington DC.*

17. Chaussard, E., Assessment of Geohazards and Natural Resources with remote sensing of ground deformation, *University at Buffalo, Buffalo NY.*

16. Chaussard, E., Bürgmann, R., Milillo, P., Baker, B., and Fielding, E. From surface and groundwater monitoring to characterization of aquifer systems properties with InSAR, *Earthscope synthesis workshop on hydrogeodesy, Scripps, U.C. San Diego, CA.*

15. Chaussard, E., Taking the pulse of volcanoes from space, *Cascade Volc. Obs., Vancouver, WA.*

**2016**

14. Chaussard, E., Milillo, P., Bürgmann, R., Perissin, D., Fielding, E., and Baker, B. From measuring land subsidence to characterizing aquifer properties with InSAR. *AGU Fall meeting, San Francisco.*

13. Chaussard, E., Remote sensing of ground deformation for resources and hazards management. *University of Illinois at Urbana–Champaign, Champaign, IL.*

12. Chaussard, E., Exciting new applications of InSAR to characterize Geohazards. *2016 UNAVCO Science Workshop, Denver, CO.* https://www.youtube.com/watch?v=4_pfx7X1ZPA

11. Chaussard, E., From measuring land subsidence to characterizing aquifer properties with InSAR. *UNAVCO Science Workshop, Denver, CO.*

10. Chaussard, E., Remote sensing of ground deformation: an indispensable tool for resources and hazards management. *School of Arts and Sciences, University of Rochester, Rochester, NY.*

9. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., Taira, T. and Johanson, I. Interseismic deformation and potential for larger earthquakes on the Hayward-Calaveras Fault system. *UC Berkeley, CA.*

**2015**

8. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., Taira, T. and Johanson, I. Interseismic deformation along the Calaveras fault and refining the geometry of the Hayward-Calaveras stepover. *Fringe Workshop, Frascati, Italy.*

7. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., Taira, T. and Johanson, I. Interseismic deformation and potential for larger earthquakes on the Hayward-Calaveras Fault system. *North. Cal. Earthquake Hazards Workshop, Menlo Park, CA.*

**2014**

6. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., and Johanson, I. Interseismic deformation along the Calaveras fault and refining the geometry of the Hayward-Calaveras stepover. *USGS Seminar Series, Menlo Park, CA.*

5. Chaussard, E., Bürgmann, R., Shirzaei, M., and Baker, B. Long-term and seasonal ground deformation in the Santa Clara Valley, California, revealed by multi decadal InSAR time series. *AGU Fall meeting, San Francisco, CA.*

4. Chaussard, E., and Kerosky, S. Remote sensing of illegal black sand mining in the Philippines. *UC Berkeley's Center for Effective Global Action annual seminar, Berkeley, CA.*

3. Chaussard, E., and Bürgmann, R. Remote sensing of ground deformation: an indispensable tool for groundwater resources and hazards management. *MIT's Earth, Atmospheric, and Planetary Sciences Department seminar series, Cambridge, MA.*

2. Chaussard, E., and Bürgmann, R. Aquifer and fault properties characterization using InSAR-derived ground deformation: Example of the Santa Clara Valley, CA. *International Workshop on Surface and Subsurface 4D-Monitoring, KAUST, Thuwal, Saudi Arabia.*

**2013**

1. Chaussard, E., Amelung, F., Wdowinski, S., Dixon, T.H., Aoki, Y., Cabral-Cano, E., Abidin, H., and Hong, S-H., Characterization of geohazards at regional scales using space geodesy: examples of land subsidence and volcanic eruptions. *UC Berkeley Seismological Lab, CA.*

## Conference presentations (*Presenter is/was my direct advisee or co-advisee)

**2020**

39. Chaussard, E., Havazli. E., Fattahi, H., Crabral-Cano, E. Over a Century of Sinking in Mexico City: No Hope for Elevation, Water Levels, and Water Quality Recovery *AGU Fall meeting, Online.*

38. Bussard, R.*, Chaussard, E. Measuring Long-Term Subsidence of Mount St. Helens 1980 Deposits with Combined InSAR, GNSS. Poster at the *AGU Fall meeting, Online.*

37. Nassif, R.*, Chaussard, E., Burbey, T. From Satellites to Storativity: Using Interferometric Synthetic Aperture Radar (InSAR) for Monitoring Groundwater in Central Valley California Poster at the *AGU Fall meeting, Online.*

**2019**

36. Chaussard, E., & Farr, T. G. A new method for isolating elastic from inelastic deformation in aquifer systems: Application to the San Joaquin Valley, CA. *AGU Fall meeting, San Francisco, CA.*

35. Chaussard, E., Widespread Subsidence and Carbon Emissions across Southeast Asian Peatlands, Poster at the *SAGE/GAGE, Portland, OR.*

**2018**

34. Chaussard, E., Hoyt, A., Harvey, C., Bridging Earth Systems Sciences with InSAR: from Quantifying Land Subsidence to Estimating the $CO_2$ Emissions Associated with Peatlands Oxidation Following Deforestation in Southeast Asia, *AGU Fall meeting, Washington D.C.*

33. Girven, E.*, Chaussard E., Statistical and Geospatial Analysis of InSAR data for Characterization of Processes Controlling Motion of the Slow-moving Berkeley Landslides. Poster at the *AGU Fall meeting, Washington D.C.*

32. Longuevergne, L., Castellazzi, P., Martel, R., Rivera, A., Brouard, C., & Chaussard, E., Deciphering small-scale groundwater storage changes from combined interpretation of GRACE and InSAR. Poster at the *EGU meeting, Vienna, Austria.*

**2017**

31. Hoyt, A.*, Harvey, C. F., Seppalainen, S. S., & Chaussard, E. Subsidence in tropical peatlands: Estimating CO2 fluxes from peatlands in Southeast Asia. *AGU Fall meeting, San Francisco, CA.*

**2016**

30. Chaussard, E., Dynamics of open system volcanoes: constraints from 19 years of InSAR and GPS data at Mt. St. Helens. Poster at the *AGU Fall meeting, San Francisco, CA.*

29. Xu, W., Burgmann, R., Johnson, C. W., Chaussard, E., Nadeau, R. M., Murray, J. R. & Materna, K. Interseismic coupling of major faults in the north San Francisco Bay from InSAR, GPS and seismic data. Poster at the *AGU Fall meeting, San Francisco, CA.*

28. Farge, G., Delbridge, B.G., Materna, K., Johnson, C. W., Chaussard, E., Jones, C. E., & Burgmann, R. Refining interseismic fault slip and shallow creep on the Hayward and Calaveras Faults, California, using UAVSAR, satellite InSAR and GPS data. *AGU Fall meeting, San Francisco, CA.*

**2015**

27. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., Taira, T. and Johanson, I. Interseismic coupling on the Hayward-Calaveras fault zone from InSAR. Poster at the *AGU Fall meeting, San Francisco, CA.*

26. Castellazzi, P., Martel, R., Rivera, A., Huang, J., Calderhead, A., Chaussard, E., and Gárfias Soliz, J. Remote sensing and hydrogeology: GRACE and InSAR to assess groundwater sustainability in Central Mexico. *NGWA Groundwater summit, San Antonio, TX.*

25. Chaussard, E., Bürgmann, R., Fattahi, H., Johnson, C.W., Nadeau, R., Taira, T. and Johanson, I., Interseismic deformation along the Calaveras fault and refining the geometry of the Hayward-Calaveras stepover. *2015 Fringe Workshop, Frascati, Italy.*

**2014**

24. Chaussard, E., et al. Interseismic deformation in the San Francisco Bay Area and slip estimates on the Calaveras-Hayward Faults from InSAR alone. Poster at the *AGU Fall meeting, San Francisco, CA.*

23. Fattahi, H., Amelung, F., Chaussard, E., Wdowinski, S., & Dixon, T. H. Characterizing seismic and aseismic deformation along the Chaman fault system with InSAR. Poster at the *AGU Fall meeting, San Francisco, CA.*

22. Castellazzi, P., Martel, R., Gárfias Soliz, J., Calderhead, A., Rivera, A., Chaussard, E., Groundwater Deficit and Land Subsidence in the Lerma-Santiago-Pacifico Watershed, Mexico. *NGWA Groundwater Summit, May 4-7, Denver, CO.*

**2013**

21. Chaussard, E., Bürgmann, R., Shirzaei, M., and Baker, B., Long-term and seasonal ground deformation in the Santa Clara Valley, California, revealed by multi decadal InSAR time series. Poster at the *AGU Fall meeting, San Francisco, CA.*

20. Chaussard, E., Amelung, F., and Aoki, Y., Detection of Cyclic Behaviors and Characterization of Magma Storage at Andesitic Volcanoes using Regional Time Series. *Living Planet Symposium, Edinburgh, UK.*

19. Chaussard, E., Wdowinski, S., Amelung, F., Cabral-Cano, E., Abidin, H., Hong, S-H., Land subsidence in central Mexico and Indonesia: Differences and Similitudes from Regional ALOS Time-series Surveys. Poster at the *Living Planet, Edinburgh, UK.*

18. Chaussard, E., Wdowinski, S., Cabral E., and Amelung, F., Magnitude and extent of land subsidence in central Mexico revealed by regional InSAR ALOS time-series survey. *AGU of the Americas, Cancun, Mexico.*

17. Chaussard, E., Amelung, F., Depth of magma storage in volcanic arcs: testing the influence of regional parameters using a global data compilation. Poster at the *EGU, Vienna, Austria.*

16. Chaussard, E., Wdowinski, S., Cabral E., Amelung, F., Magnitude and extent of land subsidence in central Mexico revealed by regional InSAR ALOS time-series. Poster at the *EGU, Vienna, Austria.*

15. Cabral-Cano, E., Arciniega-Ceballos, A., Vergara-Huerta, F., Chaussard, E., Wdowinski, S., DeMets, C., Salazar-Tlaczani, L., Shallow Faulting in Morelia, Mexico, Based on Seismic Tomography and Geodetically Detected Land Subsidence. *AGU Fall meeting, San Francisco, CA.*

**2012**

14. Chaussard, E., Amelung, F., Aoki, Y., Precursory deformation and magma storage depths revealed by regional InSAR time series surveys: example of the Indonesian and Mexican volcanic arcs. Poster at the *AGU Fall meeting, San Francisco, CA*.

13. Chaussard, E., Amelung, F., Abidin, H., & Hong, S.-H., Sinking cities in Indonesia: ALOS PALSAR detects rapid subsidence due to groundwater and gas extraction. Poster at the *AGU Fall meeting, San Francisco, CA*.

12. Chaussard, E., Amelung, F., Aoki, Y., Taking the pulse of volcanoes using InSAR: Examples of arc-wide surveys in Indonesia and Mexico. *Cities on Volcanoes 7, Colima, Mexico*.

11. Morales Rivera, A. M., Chaussard, E., Amelung, F., InSAR observations of active volcanoes in Latin America. Poster at the *AGU Fall meeting, San Francisco, CA*.

**2011**

10. Chaussard, E., Amelung, F., Space-geodetic evidence of shallow magma reservoirs in the west-Sunda arc; Insights from global data compilation on what controls magma ascent in volcanic arcs. *AGU Fall meeting, San Francisco, CA*.

9. Chaussard, E., Amelung, F., Tectonic control of magma ascent in volcanic arcs: Space-geodetic evidence from the west-Sunda arc, Indonesia. *FRINGE workshop, Frascati, Italy*.

8. Chaussard, E., Amelung, F., Abidin, H., & Hong, S.-H., Sinking cities in Indonesia: Space-geodetic evidence of the rates and spatial distribution of land subsidence. *FRINGE workshop, Frascati, Italy.*

7. Chaussard, E., and Amelung, F., The proposed Southeast Asia natural laboratory for Geohazards: InSAR detects precursory deformation at Indonesian volcanoes. Poster at the *Volcano Observatories Best Practices workshop, Erice, Italy*.

6. Amelung, F., Chaussard, E., Baker, S., Fattahi, H., Bagnardi, M. Stress control of the depth of magma reservoirs of arc volcanoes revealed by ALOS PALSAR. *AGU Fall meeting, San Francisco, CA*.

**2010**

5. Chaussard, E., and Amelung, F., Monitoring the ups and down of Sumatra and Java with D-InSAR time series. Poster at the *AGU Fall meeting, San Francisco, CA, USA*.

4. Calais, E., Mattioli, G., Freed, A., Jansma, P., Macly, J., Stamps, S., Chaussard, E., Saint Preux, F., Mildor, S-L., Preliminary results from GPS geodetic observations after the January 12, 2010, Mw 7.0 earthquake in Haiti. Poster at the *EGU, Vienna, Austria*

**2009**

3. Chaussard, E., and Amelung, F., Monitoring the Sumatra volcanic arc with InSAR. Poster at the *AGU Fall meeting, San Francisco, CA, USA*.

**2008**

2. Chaussard, E., and Amelung, F., Coseismic deformation of the 2007 Sumatra earthquakes from InSAR. Poster at the *AGU Fall meeting, San Francisco, CA.*

1. Vernant, P., Chery, J., He, J., and Chaussard, E., Low rigidity of the Tibetan plateau and the geodetic slip rate of the Altyn-Tagh fault. *AGU Fall meeting, San Francisco, CA*.

## PROFESSIONAL SERVICE and ACTIVITIES

### Departmental Service

2020–2021 HPC committee, Dpt. of Earth Sciences, U. of Oregon
2019–2021 Awards & Admissions committee, Dpt. of Earth Sciences, U. of Oregon
2017–2018 Graduate Students Committee, Dpt. of Geology, U. at Buffalo
2017–2018 Web Committee, Dpt. of Geology, U. at Buffalo
2015–2017 Faculty Senate Representative, Dpt. of Geology representative, U. at Buffalo

### University Service

2020–2021 Member of the SAGE/GAGE relocation RFI team
2019–2021 Hiring committee, Remote Sensing position, Dpt. of Geography, U. of Oregon

### Editorship

2021– Associate Editor for *Journal of Geophysical Research: Solid Earth*
2019– Editor of a solicited *Springer* book
2019 Editor for *Journal of Geodesy*
2018–2020 Editor for *Remote Sensing*, Special Issue "SAR for Natural Hazards"
2018– Associate editor for *Remote Sensing in Earth Systems Sciences*

### Committees and related activities

2021 Re-elected for a second two-year term as the Vice Chair of the Western North America InSAR (WInSAR) Executive Committee. WInSAR facilitates collaboration in, and advancement of, Earth science research using radar remote sensing. WInSAR has 313 institution members and 1866 registered users.
2019 *National Academy of Sciences* panel member for the Board on Groundwater.
2018 –2021 Mentor for the *AGU Geodesy, Seismology, and Tectonophysics* Networking group
2018 Panel member of the 2018 *Grand Challenges in Geodesy* workshop.
2016–2018 *Board of Directors of UNAVCO – Elected*. Non-profit university-governed consortium with 5-year NSF and NASA funding of $92M.
2015 *National Academy of Sciences* panel member for the Board on Earth and Science Resources: Landslides and landslide risk.
2015 Member of the *NASA CORE* board on redefining the "Challenges and Opportunities for Research in Earth Surface and Interior".
2015 Member of the *NSF SAGE/GAGE* (Seismology Advancing Geosciences EarthScope/Geodesy Advancing Geosciences and EarthScope) writing committee. Final re "Future Seismic & Geodetic Facility Needs in Geosciences".
Convener, 2020 AGU Fall meeting, *Peatlands dynamics, disturbance and restoration.*

### Convener

2020 Convener, 2020 AGU Fall meeting, *Recent Advances in SAR and InSAR Data Processing, Big Data Analysis and Earth Science Applications.*
2018 Co-convener, 2018 AGU Fall meeting session, *Multiscale Processes Influencing Tectonics and Earthquakes at Plate Boundary Fault Systems.*

**Reviewer** (15-20 review/year) for NSF & NASA, and the following journals: Nature; Nature Geoscience; Science; Science Advances; Scientific Reports; Earth and Planetary Science Letters; Geophysical Research Letters; J. Geophysical Research; Water Resources Research; Geochemistry, Geophysics, Geosystems; Natural Hazards; Remote Sensing of Environment; Remote Sensing; Environmental Research Communications; International J. of Applied Earth Observations and Geoinformation; J. of Geodesy; Journal of Geophysics; Journal of Environmental Management; Hydrogeology Journal.


## CONTRIBUTIONS to DIVERSITY, EQUITY, and INCLUSION

- Woman in Geosciences
- Mentor of six female graduate students and three female undergraduate students
- Member of the National Association of Geoscience Teachers (NAGT) Early Career 2020 workshop focused on "Supporting Diversity and Inclusion in the Classroom and Beyond"
- Mentor for the AGU Geodesy, Seismology, and Tectonophysics Networking group since 2018
- 2014 UC Berkeley Center for Effective Global Action Award for our work on characterization of how mining activities disproportionately affect low income population and for developing a Citizen Science initiative aimed at reversing the societal impacts of illegal mining activities.
- Yearly visits and remote seminars in elementary, middle, and high-schools.
- Humanitarian worker following the 2010 Haiti earthquake to help schools restart.
- Member of Indonesian community programs aimed towards Empowerment through Education.
- Supporter of the TIGERS initiative (The Inclusion Group for Equity in Research in STEMM)
- Member of the International Association for Geoscience Diversity (IAGD)

## CODING/COMPUTING SKILLS

**Languages**: Python; C/C++; MATLAB; Fortran; Perl; xml
**Modeling software**: MODFLOW; COMSOL; DisModel; Geodmod; ADELI; ABAQUS
**Processing software**: RoiPac; ISCE; GMTSAR; MintPy; GIPSY
**Mapping software**: QGIS; ArcGIS; GeoMapApp; GMT

## FIELD EXPERIENCES

| | |
|---|---|
| 2019 | Mapping fractures in Mexico City, Mexico |
| 2015 | Mapping deposits at Paricutin volcano, Mexico |
| 2014 | GPS campaign – San Francisco Bay area, following the Napa earthquake, CA |
| 2012 | Mapping and risk evaluation: Colima volcano, Mexico |
| 2011 | Campaign at sea, Coring and mapping in the Exumas, Bahamas |
| 2010 | Haiti earthquake NSF Rapid response, Haiti |

## LANGUAGES

**French**: Native / **English**: Fluent / **Spanish**: Working Proficiency /**Italian**: Limited Proficiency

## ADVISORS

Prof. Roland Bürgmann, Earth & Planetary Science, U.C. Berkeley. *Postdoc advisor.*
Prof. Falk Amelung, Marine Geology and Geophysics, University of Miami. *PhD advisor.*
Prof. Philippe Vernant, Dept. of Geosciences, Univ. of Montpellier II, France. *MS advisor.*