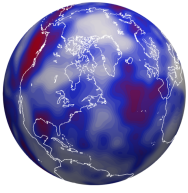


## LAURA A. ERMERT | CV

» Ambient noise seismology and site effects «



» Articles

Google Scholar, ORCID

» Social

ResearchGate, Twitter

» Code

Github

» Personal

Webpage

**Postdoctoral Research Scholar // University of Washington** (Seattle)

Since 01/2021

- » Monitoring of the Mexico City basin
- » Seismic hazard of sedimentary basins

**Postdoctoral Fellow // Harvard University** (quake.fas.harvard.edu)

2020 - 2021

- » Ambient noise based monitoring
- » Basin effects

**Postdoc Mobility Fellow // University of Oxford** (seis.earth.ox.ac.uk)

2018 - 2019

- » Regional-scale ambient seismic source inversion
- » Contributions to supervision and tutoring

**Research assistant // ETH Zürich** (cos.ethz.ch)

2017 / 07 - 12

- » Elaborating a frequency-dependent global ambient seismic source model
- » Contribution to a web portal for daily ambient seismic source maps

## EXPERIENCE

**Doktorin der Wissenschaften** (ETH Zürich)

2017 / 06

- » PhD Thesis: Ambient seismic source inversion
- » Supervisor: Andreas Fichtner

**MSc with distinction in Earth Sciences** (ETH Zürich)

2011 - 2013

- » Major in Geophysics
- » Master Thesis on seismic resonance of Alpine Valley sediment fill

**BSc in Earth Sciences** (ETH Zürich)

2007 - 2011

- » Geology Profile
- » Bachelor Thesis in Earth surface dynamics

## EDUCATION

**ERI short-term visitor** (Earthquake Research Institute, Tokyo)

2019 / 09

- » Seismic wave propagation model for Sea of Japan region
- » Host: Kiwamu Nishida

effects

**JSPS strategic Fellow** (Earthquake Research Institute, Tokyo)

2016 / 09 - 12

- » Identifying strong-noise events in the Sea of Japan
- » Host: Kiwamu Nishida

**Visiting Student Researcher** (University of California, Berkeley)

2009 / 08 - 12

- » Classes in geomorphology, seismology and sedimentology

## EXCHANGE

# TEACHING

## Co-supervised Students

- › Kristiina Joon, MSc 2020, University of Oxford
- › Jonas Igel, MSc 2019, ETH Zürich
- › Myrna Staring and Evan Delaney, MSc 2015, ETH Zürich

## Tutor / Field instructor / Teaching assistant

- › Vector Calculus, Earth Science undergraduate, Oxford University, Michaelmas 2018
- › Geophysical fieldwork, Earth Science undergraduate, ETH Zürich, Spring terms 2013, 2014, 2015
- › Dynamische Erde, Earth Science undergraduate, ETH Zürich, 2011
- › Mathematik I & II, Earth / Agriculture / Food Science undergraduate, ETH Zürich, 2010

# AWARDS

## Grants and Studentships

- › Swiss National Science Foundation Early Postdoc Mobility 2018 - 2019
- › Scholar of German National Academic Foundation 2007 - 2013

## Awards

- › MSc thesis: ETH medal 2013
- › MSc thesis: Swiss society for Earthquake engineering and structural dynamics award

## Short-term and travel grants

- › Earthquake Research Institute (Tokyo) short term visitor, October 2019
- › Roland Schlich Travel Grant, EGU General Assembly 2019
- › Japanese Society for the Promotion of Science strategic Fellowship, Sep - Dec 2016

# SEMINARS

## Academia Sinica (Taipei, Taiwan)

2019 / 09

- › Invited talk at Workshop on Frontiers in seismic interferometry

## Utrecht University (Utrecht, Netherlands)

2018 / 06

- › Invited talk at Doctoral defense symposium of Nienke Blom

## TIDES Advanced training school (Sesimbra, Portugal)

2016 / 09

- › Software Tutorial on ambient seismic noise processing

## Institut du Physique de Globe (Paris France)

2015 / 06

- › IPGP Seminar

### Conference session organization

- » EGU General assembly 2020: Session "Ambient seismic noise" (main convener)
- » AGU Fall meeting 2020: Session "Correlation seismology" (co-convener)
- » EGU General assembly 2020: Session "Ambient seismic noise" (co-convener)
- » EGU General assembly 2019: Session "Ambient seismic noise" (co-convener)

### Peer-reviewing

- » Geophysical Journal International (Outstanding reviewer 2019)
- » Journal of Geophysical Research (2019 Editor's citation for excellence in refereeing)
- » Geophysical Research Letters

### Blog Co-editor

2016 - 2018

- » EGU seismology division blog

### Human

- » English (fluent)
- » German (native speaker)
- » French (B2-C1 in 2009)
- » Italian (basic)

### Programming

- » Python
- » Passive knowledge of Fortran
- » Supporting tools: Git, bash, slurm

## Under review

- Ermert, L., Sager, K., Nissen-Meyer, T. and Fichtner, A. (under review, *Geophys. J. Int.*): Multi-frequency global ambient seismic source inversion.
- Igel, J., Ermert, L. and Fichtner, A. (under review, *Geophys. J. Int.*): Rapid finite-frequency microseismic noise source inversion at regional to global scales. *EarthArXiv*, doi:10.31223/osf.io/9snjm.

## Peer-reviewed journal articles

- Ermert, L., Igel, J., Sager, K., Stutzmann, E., Nissen-Meyer, T., and Fichtner, A. (2020): Introducing *noisi*: A Python tool for ambient noise cross-correlation modeling and noise source inversion, *Solid Earth*, <https://doi.org/10.5194/se-2020-57>.
- Fichtner, A., Bowden, D. and Ermert, L. (2020): Optimal processing for seismic noise correlations, *Geophysical Journal International*, , ggaa390, <https://doi.org/10.1093/gji/ggaa390>
- Sager, K., Boehm, C., Ermert, L., Krischer, L., and Fichtner, A. (2020). Global-Scale Full-Waveform Ambient Noise Inversion. *J. Geophys. Res.: Solid Earth*, 125(4), e2019JB018644.
- Sager, K., Boehm, C., Ermert, L., Krischer, L., and Fichtner, A. (2018). Sensitivity of seismic noise correlation functions to global noise sources. *J. Geophys. Res.: Solid Earth*, 123, 691–6921.
- Ermert, L., Sager, K., Afanasiev, M., Boehm, C., and Fichtner, A. (2017). Ambient seismic source inversion in a heterogeneous Earth: Theory and application to the Earth's hum. *J. Geophys. Res.: Solid Earth*, 122, 9184–9207.
- Sager, K., Ermert, L., Boehm, C., and Fichtner, A. (2017), Towards Full Waveform Ambient Noise Inversion, *Geophys. J. Int.*, 212(1), 566–590.
- Delaney, E., Ermert, L., Sager, K., Kritski, A., Bussat, S., and Fichtner, A. (2017). Passive seismic monitoring with nonstationary noise sources. *Geophysics*, 82(4), KS57–KS70.
- Fichtner, A., Ermert, L. and Gokhberg, A. (2017). Seismic Noise Correlation on Heterogeneous Supercomputers. *Seismological Research Letters* ; 88 (4): 1141–1145.
- Fichtner, A., Stehly, L., Ermert, L., and Boehm, C. (2017), Generalized interferometry – I: Theory for interstation correlations, *Geophys. J. Int.*, 208(2), 603.
- Ermert, L., Villaseñor, A., and Fichtner, A. (2016), Cross-correlation imaging of ambient noise sources, *Geophys. J. Int.*, 204(1), 347–364.
- Afanasiev, M., Peter, D., Sager, D., Simute, S., Ermert, L., Krischer, L., and Fichtner, A. (2016), Foundations for a multiscale collaborative earth model, *Geophys. J. Int.*, 204(1), 39.
- Poggi, V., Ermert, L., Burjánek, J. Michel, C. and Fäh, D. (2015), Modal analysis of 2-d sedimentary basin from frequency domain decomposition of ambient vibration array recordings, *Geophys. J. Int.*, 200(1), 615.
- Ermert, L., Poggi, V., Burjánek, J., and Fäh, D. (2014), Fundamental and higher two-dimensional resonance modes of an alpine valley, *Geophys. J. Int.*, 198(2), 795.