

HARRIET C.P. LAU

ADDRESS

Earth & Planetary Science
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POSITIONS

2019 – present

Assistant Professor
EARTH AND PLANETARY SCIENCE, UNIVERSITY OF CALIFORNIA, BERKELEY, USA

2017 – 2019

Junior Fellow
SOCIETY OF FELLOWS, HARVARD UNIVERSITY, USA

EDUCATION

2012 – 2017

HARVARD UNIVERSITY, USA
Ph.D. in Earth and Planetary Sciences
Thesis Advisor: Prof. Jerry X. Mitrovica

2008 – 2012

IMPERIAL COLLEGE LONDON, UK
Master of Science in Geophysics (with First Class Honors)
Thesis Advisors: Dr. Saskia Goes & Dr. Rhodri Davies

2010 – 2011

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, USA
Visiting student, Department of Earth Atmospheric & Planetary Sciences
Academic Advisor: Prof. Daniel Rothman

AWARDS

2016

American Geophysical Union (AGU) *Study of the Deep Earth Interior Graduate Research Award*

2016

Harvard Graduate School of Arts and Sciences *Merit Research Fellowship*

2015

Geophysical Journal International's *Best Student Author Award* for "A normal mode treatment of semi-diurnal body tides on an aspherical, rotating and anelastic Earth"

2015

Departmental *Shaler Teaching Award* for Introduction to Global Geophysics (Fall 2014)

2013 – 2017

The Harvard Bok Center's *Certificate for Distinction in Teaching* (2013–2015, 2017)

2013

The AGU *Outstanding Student Paper Award* for the oral presentation of "Constraining Deep Earth Structure Using Tidal Tomography"

2012

Imperial College's *ESE Student Centenary Prize* for outstanding Masters Theses

2008 – 2012

Imperial College's *Ash Music Scholarship* for piano studies at the Royal College of Music

TEACHING

2013 – 2017

Teaching Fellow for undergraduate courses "Global Geophysics" and "A Brief History of Earth" (Harvard)

2014

Volunteer Virtual Teaching: Remote lessons in natural disasters at Spring Hill Elementary School, Austin, TX

2011 – 2012

Teaching Assistant for undergraduate course in Statistics/Computing (Imperial)

2009 – 2010

Volunteer science teacher at elementary schools in disadvantaged areas in London (Pimlico Connection)

MEMBERSHIPS

2013 – present

European Geosciences Union

2012 – present

American Geophysical Union

2012 – present

Associate of the Royal School of Mines

CONFERENCE/WORKSHOP ORAL PRESENTATIONS

- AGU (Dec 2018): “Anelasticity from Seismic to Tidal Timescales: Theory and Observations” (Abstract number: MR31A-07)
- AGU (Dec 2017): “Constraining LLSVP Buoyancy With Tidal Tomography” (Abstract number: DI43C-06)
- AGU (Dec 2016): “Tidal Tomography: New Insights into Long Wavelength Deep Mantle Buoyancy Structure” (Abstract number: DI23C-05)
- AGU (Dec 2013): “Constraining Deep Earth Structure Using Tidal Tomography” (Abstract number: DI41B-01)

INVITED TALKS/SEMINARS

- European Geosciences Union Meeting (Vienna, Austria), April 2019, *Seminar on Mantle Structure and Evolution*
- Yale University, February 2019, *Departmental Colloquium*
- Johns Hopkins University, November 2018, *Bromery Lecture*
- University of British Columbia, September 2018, *Departmental Colloquium*
- Study of the Earth’s Deep Interior Conference (Edmonton, Canada), July 2018, *Zatman Lecture*
- University of Michigan, Mar 2018, *Smith Lecture*
- McGill University, Feb 2018, *Earth and Planetary Sciences Department GEOTOP Lecture*
- Massachusetts Institute of Technology, May 2017, *Special Seminar*
- University of California Berkeley, March 2017, *Berkeley Earth and Planetary Science Departmental Seminar*
- Brown University, February 2017, *Lunch Bunch Seminar*
- Princeton University (Geosciences Department), October 2016, *Brown Bag Seminar*
- Columbia University (LDEO), April 2016, *Marine Geology and Geophysics/Seismology, Geodesy and Tectonics Seminar*

SERVICE

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| 2018 | AGU Session Convener |
| 2017 | NSF Proposal Reviewer |
| 2015 | Graduate student field trip leader to the southwest US (10 days in Arizona, Utah, and Nevada) |
| 2014 – 2015 | Solid Earth graduate student seminar organizer |

PUBLICATIONS

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| 2019 | Lau, H.C.P. and Faul, U. “Anelasticity from Seismic to Tidal Timescales: Theory and Observations”, <i>Earth and Planetary Science Letters</i> , 508: 18-29. |
| 2018 | Lau, H.C.P. , Austermann, J., Mitrovica, J.X., Crawford, O., Al-Attar, D., and Latychev, K. “Inferences of Mantle Viscosity based on Ice Age Datasets: The Bias in Radial Viscosity Profiles due to the Neglect of Laterally Heterogeneous Viscosity Structure”, <i>Journal of Geophysics: Solid Earth</i> , 123: 7237-7252 |
| 2018 | Crawford, O., Al-Attar, D., Tromp, J., Mitrovica J.X., Austermann, J., and Lau, H.C.P. “Quantifying the sensitivity of post-glacial sea level change to laterally varying viscosity”, <i>Geophysical Journal International</i> , 214(2): 1324-1363. |
| 2017 | Lau, H.C.P. , Davis, J.L., Mitrovica J.X., Tromp, J., Al-Attar, D., Latychev, K., and Yang, H.-Y. “Using Tidal Tomography to Constrain Deep Mantle Buoyancy”, <i>Nature</i> , 551:321-326. |
| 2017 | Wilmes, S.-B., Mattias Green, J.A., Gomez, N., Rippeth, T.P., and Lau, H.C.P. “Global tidal impacts of large-scale ice-sheet collapses”, <i>Journal of Geophysical Research: Oceans</i> , 122. |
| 2017 | Lau, H.C.P. , Faul, U., Mitrovica, J.X., Al-Attar, D., Tromp, J., and Garapic, G. “Anelasticity across Seismic and Tidal Timescales: a Self-Consistent Approach”, <i>Geophysical Journal International</i> , 208(1): 368-384. |
| 2016 | Hay, C.C., Lau, H.C.P. , Gomez, N., Austermann, J., Powell, E., Mitrovica, J.X., Latychev, K., and Wiens, D. “Sea-level fingerprints in a region of complex Earth structure: The case of WAIS”, <i>Journal of Climate</i> , 30(6): 1881-1892. |
| 2016 | Lau, H.C.P. , Mitrovica, J.X., Austermann, J., Crawford, O., Al-Attar, D., and Latychev, K. “Inferences of Mantle Viscosity Based on Ice Age Datasets: I. Radial Structure”, <i>Journal of Geophysical Research: Solid Earth</i> , 121: 6991-7012. |
| 2016 | Goldberg, S., Lau, H.C.P. , Mitrovica, J.X., and Latychev, K. “The Timing of the Black Sea Flood Event: Insights from Modeling of Glacial Isostatic Adjustment”, <i>Earth and Planetary Science Letters</i> 452: 178-184. |
| 2015 | Lau, H.C.P. , Yang, H.-Y., Tromp, J., Mitrovica, J.X., Latychev, K., and Al-Attar, D., “A normal mode treatment of semi-diurnal body tides on an aspherical, rotating and anelastic Earth”, <i>Geophysical Journal International</i> 202(2): 1392-1406. |
| 2015 | Davies, D.R., Goes S., Lau, H.C.P. “Thermally Dominated Deep Mantle LLSVPs: A Review” in “The Earth’s Heterogeneous Mantle: A Geophysical, Geodynamical, and Geochemical Perspective”. Khan, A., Deschamps, F. (Eds). Springer International Publishing. |