

# Sara Lafia, Ph.D.

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## Education

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<b>Ph.D. in Geography</b>	2020
University of California, Santa Barbara, CA <i>Emphasis:</i> Information Technology and Society <i>Dissertation:</i> Designing for Serendipity: Research Data Curation in Topic Spaces <i>Committee:</i> Werner Kuhn (Chair), James Frew, Kelly Caylor, and Daniel Montello	
<b>M.A. in Geography</b>	2017
University of California, Santa Barbara, CA	
<b>B.S. in Urban Planning &amp; B.S. in Geography - GIS (Valedictorian)</b>	2014
Kellogg Honors College at California State Polytechnic University, Pomona, CA	

## Appointments

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<b>Research Fellow</b>	2020 - present
ICPSR, University of Michigan, Ann Arbor, MI	
<b>Graduate Student Researcher</b>	2014 - 2020
Center for Spatial Studies, University of California, Santa Barbara, CA	
<b>Engineering Intern</b>	2017
Esri Research & Development, Arlington, VA	
<b>Informatics Intern</b>	2016
National Center for Ecological Analysis and Synthesis, Santa Barbara, CA	

## Publications

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### Preprint Articles

Lafia, S., Kuhn, W., & Caylor, K. (2020). [Mapping Research Topics at Multiple Levels of Detail](#). EarthArXiv.

### Refereed Journal Articles

Lafia, S., & Kuhn, W. (2018). [Spatial Discovery of Linked Research Datasets and Documents at a Spatially Enabled Research Library](#). *Journal of Map & Geography Libraries*, 14(1), 21-39.

Coggins, B. L., Lafia, S., & Torghabeh, B. V. (2018). [Dramatic Change in North Korea: Instability and Human Flight Propensity](#). *North Korean Review*, 14(1), 49-70.

**Lafia, S.**, Jablonski, J., Kuhn, W., Cooley, S., & Medrano, F. A. (2016). [Spatial Discovery and the Research Library](#). *Transactions in GIS*, 20(3), 399-412.

### Refereed Conference Papers

Hervey, T., **Lafia, S.**, & Kuhn, W. (2020). [Search Facets and Ranking in Geospatial Dataset Search](#). In *11th International Conference on Geographic Information Science (GIScience 2021)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

**Lafia, S.**, Last, C., & Kuhn, W. (2019). [Enabling the Discovery of Thematically Related Research Objects with Systematic Spatializations](#). In *14th International Conference on Spatial Information Theory (COSIT 2019)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

**Lafia, S.**, Turner, A., & Kuhn, W. (2018). [Improving Discovery of Open Civic Data](#). In *10th International Conference on Geographic Information Science (GIScience 2018)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

Allen, C., Hervey, T., **Lafia, S.**, Phillips, D. W., Vahedi, B., & Kuhn, W. (2016). [Exploring the Notion of Spatial Lenses](#). In *International Conference on Geographic Information Science* (pp. 259-274). Springer, Cham.

### Short Papers and Workshop Proceedings

**Lafia, S.**, Xiao, J., Kuhn, W., & Hervey, T. (2019). [Talk of the Town: Discovering Government Data via Conversational Voice Assistants](#). In *14th International Conference on Spatial Information Theory (COSIT 2019)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

Golubovic, N., Krintz, C., Wolski, R., **Lafia, S.**, Hervey, T., & Kuhn, W. (2016). [Extracting Spatial Information from Social Media in Support of Agricultural Management Decisions](#). In *Proceedings of the 10th Workshop on Geographic Information Retrieval* (p. 4). ACM.

**Lafia, S.**, & Staehli, L. (2016). [From Research Objects to Research Networks: Combining Spatial and Semantic Search](#). In *SDW@ GIScience* (pp. 35-40).

### News Articles and Reports

**Lafia, S.**, & Kuhn, W. (2019). [Enabling the Spatial Discovery of Research Data in Libraries](#). In *US National Report. (US National Committee for the International Cartographic Association)*.

Seltmann, K., **Lafia, S.**, Paul, D., James, S., Bloom, D., Rios, N., ... & Davis, E. (2018). [Georeferencing for Research Use \(GRU\): An Integrated Geospatial Training Paradigm for Biocollections Researchers and Data Providers](#). *Research Ideas and Outcomes*, 4, e32449.

**Lafia, S.** & Kuhn, W. (2017). [Opening Access to University Scholarship through Spatial Discovery](#). ESRI, ArcUser.

## Presentations

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### Invited Talks

"Designing for Serendipity: Supporting Data Discovery with Spatial Curation." ICPSR: Ann Arbor, Michigan 2020

"Discovering Spatial Data for Our Changing Earth." ESIP: Tucson, Arizona 2018

## Oral Presentations

<a href="#">"Designing for Serendipity: Research Data Curation in Topic Spaces."</a>	UCSB: Dissertation Public Defense	2020
"Enabling the Discovery of Thematically Related Research Objects."	COSIT: Regensburg, Germany	2019
"Talk of the Town: Discovering Government Data."	COSIT: Regensburg, Germany	2019
"Spatially Supported Thematic Discovery of Research Data."	COSIT: Regensburg, Germany	2019
"Re-creating and Exploring Research Neighborhoods."	FORCE11 Summer Institute: UCLA	2019
"Spatial Data Discovery at UCSB: Future Directions."	Library Open Access Week: UCSB	2018
"Improving Discovery of Open Civic Data."	GIScience: Melbourne, Australia	2018
"Discovering and Sharing Campus Scholarship."	Center for Spatial Studies Lightning Talks: UCSB	2017
"Linking Geographic Footprints to Topic Spaces."	Graduate Slam Competition: UCSB	2017
"From Research Objects to Research Networks."	WAML: Stanford University	2016
"Spatial Discovery and the University Library."	TGIS Session at ESRI User Conference: San Diego, CA	2016
"People and Places: Resource Discovery in a Library Context."	AAG: San Francisco, CA	2016
"Degrees of Separation: Measuring Musicians and Places."	Center for Spatial Studies: UCSB	2016

## Poster Presentations

<a href="#">"Measuring and Improving the Efficacy of Curation Activities in Data Archives."</a>	RDA 16th Plenary: Online.	2020
<a href="#">"Supporting Interdisciplinary Research Reviews with Multi-Level Topic Maps."</a>	MIDAS 2020: Online.	2020
"Mapping Research Topics at Multiple Levels of Detail."	AIDR Symposium 2020: Online.	2020
"Research Trajectories: Topic Models of UCSB Graduate Research."	MAT EoYS: Santa Barbara, CA	2017
"Computing with Core Concepts of Spatial Information."	COSIT: Santa Fe, New Mexico	2015

## Honors and Awards

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### Fellowships and Scholarships

ESIP Community Fellow: Discovery Cluster	2020 - 2021
<a href="#">Mellichamp Ph.D. Research Fellowship:</a> UCSB 21st Century Global Dynamics	2019
<a href="#">Robert Raskin Scholarship:</a> Earth Science Information Partners	2018
<a href="#">Jack &amp; Laura Dangermond Graduate Fellowship:</a> UCSB Department of Geography	2017 - 2018
<a href="#">Greater Research Opportunities Fellowship:</a> U.S. Environmental Protection Agency	2012 - 2014
<a href="#">Prete Environmental Education Fellowship:</a> Lyle Center for Regenerative Studies	2012 - 2013

## Awards

<a href="#">Best Paper of the Year Award</a> : Journal of Map & Geography Libraries, Volume 14	2020
<a href="#">Excellence in Teaching Award</a> : UCSB Department of Geography	2019
<a href="#">Womxn/Hacks Hackathon Winner (Best Use of Google Cloud Platform)</a> : UCSB	2019
<a href="#">SAP + Esri Spatial Hackathon Finalist (Geo-machine learning)</a> : Esri DevSummit	2018

## Travel Grants

Jack & Laura Dangermond Travel Grants: UCSB Department of Geography	2014 - 2019
FORCE11 Scholarly Communication Institute Scholarship: UCLA	2019
Graduate Student Synthesis Workshop Invitation: National Socio-Environmental Synthesis Center	2017
DataONE Users Group Meeting Travel Grant: National Center for Ecological Analysis and Synthesis	2016
Google Geo for Higher Education Summit Invitation: Mountain View, CA	2014

## Research Experience

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[Research Fellow](#): ICPSR, University of Michigan 2020 - present

- Developing methods for tracking and quantifying the impact of secondary research data discovery and reuse

[Graduate Student Researcher](#): UCSB Center for Spatial Studies 2016 - 2020

- Leveraged Esri's Open Data platform for spatial discovery and linked research datasets to publications

**Research Assistant for [WhatEvery1Says \(WE1S\)](#) with Dr. Alan Liu**: UCSB Department of English 2019

- Analyzed quality and fitness for use of topic models to study humanities discourse across social media

**Research Assistant for [global-e](#) with Dr. Michael Curtin**: UCSB Department of Film and Media Studies 2019

- Designed interactive visualizations and supported publication of essays for an open access electronic journal

**Engineering Intern**: Esri Research & Development, Arlington, VA 2017

- Improved search for open civic datasets in ArcGIS Hub through extension and application of an ontology

**Research Assistant for Dr. Bridget Coggins**: UCSB Department of Political Science 2017

- Developed an agent-based model spatially simulating flight-risk scenarios based on environmental factors

**Informatics Intern**: NCEAS, Santa Barbara, CA 2016

- Extended an ontology enabling semantic metadata annotation and provenance tracking of ecological datasets

**NASA DEVELOP Student Contractor**: Jet Propulsion Laboratory, Pasadena, CA 2013

- Expedited the validation of Damage Proxy Maps derived from imaging radar data of U.S. natural disasters

**NSF-REU Summer Research Assistant**: University of Nevada, Reno, NV 2012

- Managed field data in a USGS Great Basin ArcGIS database and performed statistical analysis with SPSS

## Teaching Experience

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**Research Mentor for Undergraduate Students:** Center for Spatial Studies, UCSB 2015, 2017, 2019

- Developed a survey instrument to assess the usability of a web map with a student of Geography at UCSB
- Collaborated on a network visualization of university research with a visiting scholar from University of Bristol
- Co-authored a spatial data publication workflow for a university library with an intern from Clark University

**Teaching Associate (Instructor of Record):** Department of Geography, UCSB 2017 - 2018

- Delivered lectures and developed course material for *Introduction to Geographic Information Systems* (28 students) and *Geography of California* (60 students); received excellent student evaluations for both courses

**Workshop Instructor with Dr. Katja Selmann:** iDigBio Georeferencing Workshop, NCEAS 2016

- Developed training materials and sample data for a QGIS training workshop supporting collections managers

**Freshman Discovery Seminar Co-Instructor with Dr. Chandra Krintz:** UCSB 2015

- Introduced computer science students to GIS, designed learning activities, and facilitated guest lectures

**Teaching Assistant:** Department of Geography, UCSB 2014 - 2018

- Led sections for *Introduction to Geographic Information Systems*; *People, Place, and Environment*; *Analytical and Computer Cartography*; and *Geography of Surfing*, receiving excellent student evaluations for all courses

## Academic Service

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**Faculty Search Committee Graduate Representative:** Environmental Data Science & GIS, UCSB 2017, 2019

- Reviewed candidate materials, hosted lunches for invited candidates, and voiced graduate student opinions

**Meeting Co-organizer:** Spatial Discovery Expert Meetings, Center for Spatial Studies 2015, 2017, 2019

- Co-organized agenda and session topics on state of the art for search at the intersection of libraries and GIS

**Graduate Student Association Representative:** Associated Student Government, UCSB 2018 - 2019

- Served as an elected department representative and campus liaison for Geography graduate students

**Workshop Co-organizer:** Core Computations on Spatial Information at GIScience in Melbourne, Australia 2018

- Planned agenda, reviewed invited papers and talks, and moderated discussion at a half-day workshop

**Graduate Student Representative:** Associated Students Campus Bicycle Committee, UCSB 2017 - 2018

- Evaluated infrastructure, fielded complaints, and deployed a web application for mapping campus projects

**Manuscript Reviewer:** Journal of Spatial Information Science, International Journal of Digital Earth 2018, 2019

- Assessed suitability of manuscripts for publication via peer-review process as requested by journal editors

**GIS Help Desk Consultant:** Center for Spatial Studies, UCSB 2017

- Advised students, staff, and faculty from various research units and departments with GIS research needs

## **Skills**

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### **Certifications**

Certificate in College and University Teaching (CCUT)	2020
Summer Teaching Institute for Associates (STIA)	2017

### **Languages**

Python, R, Java, HTML/CSS/Javascript

English (native language), Spanish (proficient - reading, writing)

### **Software/OS**

ArcGIS/Server, QGIS, GDAL

Protégé, Processing, Unix/Bash

## **Affiliations**

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Association of American Geographers (AAG)

Association for Information Science and Technology (ASIS&T)

Association for Computing Machinery (ACM)

Earth Science Information Partners (ESIP)

Research Data Alliance (RDA)