

SARA LAFIA, Ph.D.

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Education

M.A./Ph.D. in Geography	2020
University of California, Santa Barbara (UCSB)	
Emphasis in 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.S. in Urban Planning & B.S. in Geography - GIS (Valedictorian)	2014
Kellogg Honors College at California State Polytechnic University, Pomona (CPP)	

Honors and Awards

Fellowships and Scholarships

Mellichamp Ph.D. Research Fellowship : UCSB 21st Century Global Dynamics	2019
Robert Raskin Scholarship : Earth Science Information Partners	2018
Jack & Laura Dangermond Graduate Fellowship : UCSB Department of Geography	2017 - 2018
Greater Research Opportunities Fellowship : U.S. Environmental Protection Agency	2012 - 2014
Prete Environmental Education Fellowship : Lyle Center for Regenerative Studies	2012 - 2013

Awards

Excellence in Teaching Award : UCSB Department of Geography	2019
Womxn/Hacks Hackathon Winner (Best Use of Google Cloud Platform) : UCSB	2019
SAP + Esri Spatial Hackathon Finalist (Geo-machine learning) : 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

Publications

Preprint Articles

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

Refereed Academic 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 Proceeding Papers

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 Proceeding Papers

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

Oral Presentations

"Designing for Serendipity: Research Data Curation in Topic Spaces:"	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 Spatial Data for Our Changing Earth."	ESIP: Tucson, Arizona	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

"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

Research Experience

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 <i>WhatEvery1Says</i> (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 <i>global-e</i> 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 - 2014
- 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

- 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

- 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

Certifications

Certificate in College and University Teaching (CCUT) 2020

Summer Teaching Institute for Associates (STIA) 2017

Software

ArcGIS, ArcGIS Server, QGIS, GDAL

Protégé, Processing, Git

Languages

Java, Python, HTML5 and CSS with Javascript

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

Affiliations

Association of American Geographers (AAG)

Association for Computing Machinery (ACM)

Association for Information Science and Technology (ASIS&T)

Cartography and Geographic Information Society (CaGIS)