

Sara Lafia, Ph.D.

Research Fellow, Inter-university Consortium for Political and Social Research (ICPSR)

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Education

Ph.D. in Geography 2020

University of California, Santa Barbara, CA

Emphasis: Information Technology and Society

Dissertation: Designing for Serendipity: Research Data Curation in Topic Spaces

Committee: 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, CA

Appointments

Research Fellow 2020 - present

ICPSR, University of Michigan, Ann Arbor, MI

Graduate Student Researcher 2014 - 2020

Center for Spatial Studies, University of California, Santa Barbara, CA

Engineering Intern 2017

Esri Research & Development, Arlington, VA

Informatics Intern 2016

National Center for Ecological Analysis and Synthesis, Santa Barbara, CA

Publications

Articles

Lafia, S., Kuhn, W., Caylor, K., & Hemphill, L. (2021). [Mapping Research Topics at Multiple Levels of Detail](#). *Patterns*, 100210.

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.

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.

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.

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.

Short 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 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

Invited Talks

- "[Measuring the Impacts of Curatorial Actions on Research Data Reuse.](#)" LIBER Webinar. Online. 2020
- "Designing for Serendipity: Supporting Data Discovery with Spatial Curation." ICPSR: Ann Arbor, Michigan 2020
- "Discovering Spatial Data for Our Changing Earth." ESIP Summer Meeting. Tucson, Arizona 2018

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 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

- "[How Does Data Curation Impact Discovery?](#)" ESIP Winter Meeting: Online 2021
- "[Measuring and Improving the Efficacy of Curation Activities in Data Archives.](#)" RDA 16th Plenary: Online 2020
- "[Supporting Interdisciplinary Research Reviews with Multi-Level Topic Maps.](#)" 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

Fellowships and Scholarships

ESIP Community Fellow : Earth Science Information Partners, Discovery Cluster	2020 - present
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

Best Paper of the Year Award : Journal of Map & Geography Libraries, Volume 14	2020
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

Research Experience

Research Fellow : ICPSR, University of Michigan	2020 - present
<ul style="list-style-type: none">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
<ul style="list-style-type: none">Leveraged Esri's Open Data platform for mapping and linking research datasets to publications	

- Research Assistant:** WhatEvery1Says (WE1S), UCSB Department of English (with Dr. Alan Liu) 2019
- Analyzed topic model quality and fitness for use to study humanities discourse in the media
- Research Assistant:** *global-e*, UCSB Department of Film and Media Studies (with Dr. Michael Curtin) 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 public datasets in ArcGIS Hub through extension and application of an ontology
- Research Assistant:** UCSB Department of Political Science (with Dr. Bridget Coggins) 2017
- Developed a spatially explicit agent-based model simulating flight-risk 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 of natural disasters derived from radar data via a web tool
- NSF-REU Summer Research Assistant:** University of Nevada, Reno, NV 2012
- Collected and managed ecological field data in a spatial database; performed statistical analysis with SPSS

Teaching Experience

- Research Mentor:** Center for Spatial Studies, UCSB 2015, 2017, 2019
- Supervised development of a survey to assess web map usability for UCSB's interactive campus map
 - Collaborated on design of a self-organizing map and network visualization of research publications
 - Co-authored a workflow for spatial research data ingest in collaboration with UCSB librarians
- Instructor of Record:** Department of Geography, UCSB 2017 - 2018
- Developed course materials and delivered lectures for *Introduction to Geographic Information Systems* (28 students) and *Geography of California* (60 students), receiving excellent student evaluations for both courses
- Workshop Co-Instructor:** iDigBio Georeferencing Workshop, NCEAS (with Dr. Katja Seltmann) 2016
- Developed training materials and sample data for a QGIS training workshop supporting collections managers
- Discovery Seminar Co-Instructor:** Department of Computer Science UCSB (with Dr. Chandra Krintz) 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

Earth Science Information Partnership (ESIP) Community Fellow: University of Michigan 2020 - present

- Organizing monthly teleconferences and biannual meeting sessions for the data discovery cluster

Reviewer: JOSIS, IJDE, Semantic Web Journal, ASIS&T 2018 - present

- Reviewing manuscripts and conference submissions on data science and Semantic Web technology topics

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

- Reviewed candidate materials, supported invited candidate visits, and facilitated the graduate student vote

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

- Co-organized agenda and session topics on spatial search at the intersection of libraries and GIS services

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

- Reviewed invited papers and talks, contributed to agenda, and moderated discussion of a half-day workshop

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

- Inventoried bicycle infrastructure and deployed an interactive web application for mapping campus projects

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

- Provided GIS research services and consultations for students, staff, and faculty from campus research units

Skills

Certifications

Certificate in College and University Teaching (CCUT) 2020

Summer Teaching Institute for Associates (STIA) 2017

Languages

Python, R, Java, Javascript with HTML/CSS

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

Software

ArcGIS/Server, QGIS, Protégé, Processing