Hailey D. Robertson

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EDUCATION

University of Southern California, Keck School of Medicine   *Los Angeles, CA*
B.S. Global Health, Minor in Human Security & Geospatial Intelligence   *Aug. 2017 - May 2021*
GPA: 3.87, magna cum laude
Independent research: Spatial distribution of waterborne infectious disease prevalence along U.S.-Mexico border using hotspot analysis (Advisor: Prof. Edward Avol)

RESEARCH EXPERIENCE

Georgetown University   *Washington, D.C. (Remote)*
Research Analyst & Data Engineer, Advisor: Ellie Graeden, PhD   *Aug. 2022 - Present*

· Manage end-to-end data analysis projects in global public health and disease ecology, including project scoping, data acquisition and cleaning, statistical and machine-learning analysis (numpy, pandas, scikit-learn), data visualization (matplotlib), and communication of findings to stakeholders
· Supervise four undergraduate and three graduate students across three different projects, providing them hands-on guidance for data collection, analysis, and visualization tasks

Talus Analytics   *Boulder, CO (Remote)*
Research Associate, Advisor: Ellie Graeden, PhD   *June 2021 - Aug. 2022*

· Maintained backend data architecture, performed analysis, and debugged application code for 8 websites within the International Disease and Events Analysis platform using SQL and Python
· Wrote policy briefs and press conference talking points covering global public health, including COVID-19 variants, non-pharmaceutical interventions in schools, and vaccine efficacy and distribution

Data Analytics & Research Intern   *May 2020 - June 2021*

· Validated thresholds for hospital capacity by performing sensitivity analysis with Python (pandas), using results to improve early warning detection for hospital surges and critical supply chain alerts
· Built mathematical models accounting for the effects of testing, non-pharmaceutical interventions, and vaccination on the transmission of COVID-19 to inform decision-making for state leadership

USC Security & Political Economy Lab   *Los Angeles, CA*
Team Lead & Research Assistant, Advisor: Jonathan Markowitz, PhD   *Aug. 2019 - May 2021*

· Developed case studies to evaluate the causal mechanisms that link natural resources and conflict
· Supervised 6 peer researchers, cleaned data using R, and edited manuscripts for publication

William & Mary Global Research Institute   *Williamsburg, VA*
Research Fellow - International Justice Lab, Advisor: Kelly Zvobgo, PhD   *Jan. 2018 - Present*

· Co-authoring manuscript using case studies from our dataset, the first of its kind on the political impact of truth commissions, to inductively generate theory about transitional justice in democracies
· Managed 8 researchers and reviewed their coding to ensure inter-coder reliability

USC Global Health & Human Rights Institute   *Los Angeles, CA*
Research Assistant, Advisor: Laura Ferguson, PhD   *Jan. 2018 - May 2019*

· Drafted a report describing the human rights-related barriers to HIV, TB, and malaria services in Kenya which was used for the Global Fund's baseline assessment of healthcare needs

PUBLICATIONS

Peer-reviewed articles

1. Katz R, Toole K, **Robertson H**, Case A, Kerr, J, Robinson-Marshall S, Schermerhorn J, Orsborn S, Van Maele M, Zimmerman R, Stevens T, COVID AMP Coding Team, Phelan A, Carlson C, and Graeden E. (2023). COVID AMP: An Open Access Database of COVID-19 Response Policies. *Nature Scientific Data.* DOI: 10.1038/s41597-023-02398-3

2. Carlin EP, Graeden E, **Robertson H**, and Katz R. (2022). Informing pandemic preparedness through a digital global health security library. *Health Security.* DOI: 10.1089/hs.2021.0141

Pre-prints & Works in preparation

1. Moore M, **Robertson H**, Rosado D, Graeden E, Carlson C, and Katz R. (2023) Preparedness in practice: An outbreak science approach to studying public health emergency response. *medRxiv.* DOI: 10.1101/2023.06.24.23291861 *Under review*

2. **Robertson H**, Graeden E, Castellanos A, Rosado D, Drake J, and Han B. (2023) Understanding Ecological Systems Using Knowledge Graphs. *Submitted*

3. **Robertson H**, Graeden E, Kerr J, Van Maele M, and Katz R. Tracking financing for global health security: Less than the sum of its parts. *In preparation*

4. Epureanu B, Han B, Graeden E, Bahl J, Rohani P, Cacciatore M, Ghadami A, Nowak G, Marty E, **Robertson H**, Sarkar S, Faizullah S, Stott G, King J, and Drake J. Using systems-of-systems to advance pandemic intelligence for preparedness and response. *In preparation*

5. Far N, **Robertson H**, Rudling A, and Zvobgo K. Confronting Truth: A Theory of Transitional Justice in Established Democracies. *In preparation*

Technical reports

1. Graeden E, **Robertson H**, and Abramowitz S. **COVID-19 and Behavioral Health in the District of Columbia**. Report prepared for the *Office of the D.C. Auditor.* April 20, 2023.

Public scholarship

1. Dasaraju S, Menon S, Nair-Desai S, and **Robertson H**. "Winning Hearts & Minds: Through a Shot in the Arm." *USC Center for Public Diplomacy.* 21 Apr. 2021.

2. Far N, **Robertson H**, and Zvobgo K. "The International Criminal Court just elected a new chief prosecutor. Here's what you need to know." *The Washington Post [Monkey Cage].* 17 Feb. 2021.

PRESENTATIONS AND TALKS

2024 **Robertson H**, Graeden E, Castellanos A, Rosado D, Drake J, and Han B. "Understanding Zoonotic Disease Systems Using Knowledge Graphs." Global Health Security Conference. Sydney, Australia. 18-21 June 2024. [*Oral presentation, under review*]

 Robertson H, Graeden E, and Katz R. "Follow the Money: A Global Analysis of Funding Dynamics for Global Health Security." Global Health Security Conference. Sydney, Australia. 18-21 June 2024. [*Oral presentation, under review*]

2023 **Robertson H**, Graeden E, Castellanos A, Rosado D, Drake J, and Han B. "Knowledge Graphs for Scalable Data Integration: A Case Study of Highly Pathogenic Avian Influenza (HPAI)." Models of Infectious Disease Agent Study (MIDAS) Network Annual Meeting. Atlanta, Georgia. 30 October 2023. DOI: 10.17605/OSF.IO/Y7MPF [*Lightning talk and poster*]

2019 **Robertson H.** "Troubled Waters: A Comparative Spatial Analysis of Water System Vulnerability and Environmental Health in Colonias Along the U.S.-Mexico Border." University of Southern California Undergraduate Research Symposium. Los Angeles, CA. 18 Dec. 2019. [*Poster*]

PANELS & WORKSHOPS

2022 "Strengthening Health System Resilience and Security: a curated collection of surge capacity tools." Invited panel, USAID Local Health System Sustainability Project. 29 Sept. 2022. [Recording]

2018 "A Changing Film Industry with Project Consent." Invited workshop, California State University, Long Beach, Women in Film Association. 29 Nov. 2018.

DATA AND SOFTWARE

Published data

1. Katz R, Toole K, **Robertson H**, Case A, Kerr, J, Robinson-Marshall S, Schermerhorn J, Zimmerman R, Stevens T, COVID AMP Coding Team, Phelan A, Carlson C, Graeden E. (2023). COVID Analysis and Mapping of Policies dataset. *Zenodo*. DOI: 10.5281/zenodo.8087600

COLLABORATIVE WORKING GROUPS

2023 Biosecurity Central Expert Advisory Group, led by C. Standley at Georgetown Univeristy.

2022-23 Heterogenous Model Integration for Infectious Disease Intelligence. NSF-funded PIPP Phase 1 project team, led by J. Drake at the University of Georgia.

SELECTED HONORS & AWARDS

2021 **Dean's List** for GPA 3.5+, Keck School of Medicine, University of Southern California (8x)

2020 **Provost's Undergraduate Research Fellowship**, University of Southern California ($1,000)

Summer Undergraduate Research Fellowship, University of Southern California ($3,000)

Legislative Member of the Year for student government, University of Southern California

Second Place, Undergraduate Writer's Conference, University of Southern California

· Robertson, H. "Leveraging Freedom Against Motherhood: A Case Study of *U.S v. Summer Thyme Creel* and Sterilization as a Sentencing Mitigation Factor"

2019 **Academic Achievement Award**, University of Southern California

Advocacy Director of the Year for student government, University of Southern California

2017 **Leadership Scholar**, University of Southern California ($62,000, 4x)

Vincent de Paul Scholarship, SCL Health ($1,000)

Best Video Campaign, Webby for Good

· Project Consent, "Consent is Simple"

TEACHING EXPERIENCE

University of Southern California   *Los Angeles, CA (Remote)*
Teaching Assistant, IR 422: Ecological Security and Global Politics   *Aug. 2020 - Jan. 2021*

· Developed materials and held office hours for course covering principles of causal inference applied to environmental change and conservation, with emphasis on research design and data collection

The Marlborough School   *Los Angeles, CA*
Assistant Debate Coach   *Aug. 2018 - May 2021*

· Coached middle and high school students rhetoric, research, and communication strategies, resulting in the first-ever qualifiers to the national tournament in the schools' history

SERVICE & LEADERSHIP

CGHSS Culture, Space, & Alumni Committee *Washington, D.C. (Remote)*
Committee Chair *Aug. 2022 - Present*

· Coordinate committee meetings, promote diversity, and connect current and former CGHSS members

USC Institute on Inequalities in Global Health *Los Angeles, CA*
Student Advisory Council Co-Chair & Founding Member *Jan. 2018 - May 2021*

· Directed a multidisciplinary group of students to improve engagement with the Institute and advance research addressing inequities in global health, focused on the 2030 Sustainable Development Goals.

USC Undergraduate Student Government *Los Angeles, CA*
Chief of Staff, Student Body Senator, & Director of Accessibility Affairs *Aug. 2017 - Aug. 2020*

· Allocated more than $2.8 million budget to enhance the undergraduate experience, and advanced university-wide initiatives on climate change, public health, and academic accessibility

USC Trojan Debate Squad *Los Angeles, CA*
Vice President *Aug. 2018 - May 2021*

· Led a 25-member team, organizing practices, improving communication, and assigning research tasks, while achieving a personal top-100 national ranking in collegiate debate

Project Consent *Topeka, KS (Remote)*
Managing Director *June 2016 - May 2019*

· Organized award-winning public awareness campaigns, and led interviews, workshops, and collaborations with partners including the White House, HBO, and Break the Cycle

PROFESSIONAL CERTIFICATIONS AND AFFILIATIONS

Certifications and training

2023 Neo4j: Fundamentals
Right to Be: Bystander Intervention Training
2022 CITI Program: Group 2. Social and behavioral research investigators and key personnel
CITI Program: Social and Behavioral Responsible Conduct of Research
CITI Program: GCP Social and Behavioral Research Best Practices for Clinical Research
2020 Episkills: Learn to Code in Python for Epidemiology – Caitlin Rivers

Professional affiliations

· Models of Infectious Disease Agent Study (MIDAS) Network, member
· Gamma Theta Upsilon Honor Society, member

SKILLS

Programming & Query Languages	Python, R, SQL, Cypher
Databases & Data Management	Neo4j, PostgreSQL, Airtable, Qualtrics
Quantitative Analysis & Visualization	ArcGIS, QGIS, Jupyter Notebook
	STATA, SPSS, LaTeX
	Microsoft Suite, Adobe Creative Suite
Web Development & Design	HTML/CSS/JS, Visual Studio Code, Amazon Web Services