

Sergio A. García Mejía

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EDUCATION

University of Maryland, College Park	Summer 2025
Ph.D., Civil and Environmental Engineering	Maryland, USA
<ul style="list-style-type: none">Graduate Certificate in Latin American & Caribbean Studies (2024)	
M.Sc., Civil and Environmental Engineering, Water Resources & Disaster Resilience Specialization	May 2020
<ul style="list-style-type: none">Fulbright Foreign Student Program Scholar (2018-2020)	Maryland, USA
Universidad de San Carlos de Guatemala	Aug. 2016
B.S., Civil Engineering (major) and Business Administration (minor)	Ciudad de Guatemala, Guatemala

FELLOWSHIPS AND AWARDS

NOAA Sea Grant Knauss Executive Fellow , Bureau of Ocean Energy Management	Jan. 2022 – Jan. 2023
Fulbright Foreign Student Program Scholar , University of Maryland	July 2018 – July 2020
Graduate Resident, Latin American and Caribbean Studies Center, University of Maryland	Jan. 2020 – July. 2020
Weather Research Instrument Research and Data Publication, Natural Hazards Center	June 2021
LACS Pop-Up Research Grant, Latin American and Caribbean Students Center, UMD	May 2023
Jacob K. Goldhaber Travel Grant, The Graduate School, UMD	May 2023
International Conference Student Support Award (ICSSA), The Graduate School, UMD	June 2023

RESEARCH & TECHNICAL EXPERIENCE

University of Maryland, Department of Civil and Environmental Engineering (CEE)	Sep. 2020 – Present
<i>Graduate Research Assistant, Ph.D.</i>	Maryland, USA
<ul style="list-style-type: none">Conducted a detailed literary review on the intersections of pro bono work and engineering.Contributed to the design of a non-probabilistic survey that was distributed nationally (in the U.S.) to study the perspectives of civil engineers on pro bono work using Qualtrics.Created databases of disaster impacts using information from digital newspapers (via Google Boolean searches) from 2015 to 2021 in Python, R, and Office.Led two teams of Spanish-speaking and English-speaking interpreters to conduct an in-depth textual analysis of over 2,000 emergency communication messages during the Eta and Iota storms, generating insights from the analysis, organizational reports, documents, and literature reviews using Office, R, Qualtrics, and Dedoose. Mentored 2 undergraduate researchers.Mentored 3 undergraduate senior students from CEE and 1 undergraduate student on her 2021 RISC Summer fellowship in quantitative research using Python, ArcGIS, and how to perform literature reviews.Facilitated introductions to clean energy and power generation to high school students, fostering interest in clean and sustainable energy careers and supporting workforce diversity in the industry.Led a team in designing a website and developing 4 educational modules on nuclear energy for K-12, high school, and college programs under the Supporting Strategic Training of Adaptable and Integrated Nuclear Workforce program for the renewable energy industry.	
<i>Graduate Research Assistant, M.Sc.</i>	Jan. 2019 – Aug. 2020
<ul style="list-style-type: none">Collected, digitized, and translated data from population and housing censuses of the last 50 years in GuatemalaAnalyzed the impacts of disasters in Guatemala through statistical (Matlab) and spatial (ArcGIS) analysis methods intersecting multiple social, demographic, infrastructure, and housing characteristics variables.Undertook a literature analysis on the interplay of housing components and disaster impacts.	
Structural Extreme Events Reconnaissance (StEER) Network	Sep. 2021 – Present
<i>Member / Virtual and Field Assessments Contributor</i>	Remote / Global
<ul style="list-style-type: none">Worked with virtual response teams of Nippes Eartquake (Haiti, 2021), Hualien City Eartquake (Taiwan, 2024), and Hurricane Helene (USA, 2024). Contributed to 2 media repositories and 1 preliminary virtual reconnaissance report.	
Environmental Justice Policy Analyst	Feb. 2022 – Feb. 2023
<i>John A. Knauss Fellowship, Bureau of Ocean Energy Management (BOEM)</i>	Washington D.C., USA
<ul style="list-style-type: none">Led workshops, discussions, and training sessions on methodological processes for quantitative and qualitative analysis of Environmental Justice criteria in BOEM offshore wind energy projects.Conducted annotated bibliographies and wrote a report on best practices for Environmental Justice analysis in National Environmental Policy Act BOEM projects.Represented BOEM in multiple interagency committee meetings, such as the White House Environmental Justice Advisory Council (WHEJAC), the Natural Disasters & EJ Subcommittee, the USGS Risk Community of Practice, the Science for Disaster Risk Reduction (SDR) Interagency Working Group and the Justice40 Subcommittee.Represented BOEM at the Alaska Federation of Natives Convention (Anchorage, AK, 2022).	

PUBLICATIONS

Thesis

- 2021 **García Mejía, Sergio**. Building Resilience or Building Fragility? Understanding Disaster Resilience Patterns in Guatemala through the Analysis of Disaster Datasets in Connection with Population and Housing Census Information. University of Maryland. <https://doi.org/10.17603/ds2-29ee-1862>

Dataset and instrument

- 2021 **García Mejía, S.**, N. Ghosh, M. Bensi. Leveraging digital news to create databases of the impacts of small, medium and, large disasters. DesignSafe-CI. <https://doi.org/10.17603/ds2-29ee-1862>

Reports

- 2024 Kyprioti, A., J. Yuzbasi, H. Dang, A. Jana, S. Kameshwar, A. Diekmann, **S. Garcia**, [full list of authors in the link]. "StEER: Hurricane Helene Annotated Media Repository", in StEER - Hurricane Helene. DesignSafe-CI. <https://doi.org/10.17603/ds2-mxeh-7712>
- 2024 Wolohan, K., K. Mosalam, A. Jana, N. BEKTAS, K. Erazo, **S. Garcia**, [full list of authors in the link]. "StEER: 2024 Hualien City Earthquake Annotated Media Repository", in StEER- 2024 Hualien City, Taiwan Earthquake. DesignSafe-CI. <https://doi.org/10.17603/ds2-4xv5-qc41>
- 2023 Safiey, A., D. Roueche, L. Huallpa, W. Hassan, C. Reis, S. Sorosh, M. Lopez Ruiz, Y. Merino-Peña, L. Vargas, A. Dilsiz, A. Martin, J. Cohen, Z. Khalil, B. Tunc, **S. Garcia**, [full list of authors in the link]. "StEER: 2023 Mw 7.8 Kahramanmaras, Turkiye Earthquake Sequence Preliminary Virtual Reconnaissance Report (PVRR) Media Repository", in StEER- February 6, 2023, Kahramanmaras, Türkiye, Mw 7.8 Earthquake [Version 2]. DesignSafe-CI. <https://doi.org/10.17603/ds2-mm04-xq43>
- 2021 Kijewski-Correa, T., B. Alhawamdeh, C. Arteta, W. DJIMA, T. Do, **S. Garcia**, [full list of authors in the link]. "StEER: M7.2 Nippes, Haiti Earthquake Preliminary Virtual Reconnaissance Report (PVRR)", in StEER - 14 August 2021, M7.2 Nippes Earthquake, Haiti. DesignSafe-CI. <https://doi.org/10.17603/h7vg-5691>

In Preparation

- **García Mejía, Sergio**. Reducing Information Gaps in Critical Infrastructure Through Geocoding and Surrogate Addressing Protocols. Target journal: International Journal of Disaster Risk Reduction
- **García Mejía, Sergio**. Short messaging emergency communication practices during Tropical Cyclones Eta and Iota in Guatemala. Target journal: International Journal of Disaster Risk Reduction.
- **García Mejía, Sergio**. Leveraging Digital News to Create Databases of the Impacts of Small, Medium, and Large Disasters. Target journal: Computers, Environment and Urban Systems.

WATER RESOURCES / CIVIL & ENVIRONMENTAL ENGINEERING EXPERIENCE

Municipal Government of Jocotenango

Jan. 2017 – July 2018

Planning Department Supervisor

Jocotenango, Sacatepequez, Guatemala

- Supervised the construction of seven different municipal projects for a total value of \$1M.
- Led the design of sewage water treatment plants, water supply systems, stormwater management, riverbank protection structures, and sports field drainage systems. Used AutoCAD and Office tools.
- Led the financial planning of municipal projects for the year 2019 through intra-institutional coordination and the ministries of education, health, culture, and sports. Used Microsoft Excel for budgeting.
- Trained 6 teammates from the Department of Municipal Planning to implement standardized project design processes using AutoCAD, Excel, a systematized collective design protocols.

Agua-Info, S.A., 26 Ave. 10-76 zona 7 Kaminal Juyu 1, Ciudad de Guatemala

Aug. 2016 – Dec. 2016

Field Researcher

Ciudad de Guatemala, Guatemala

- Measured and analyzed the hydraulic inventory (open channels, pipelines) of sugarcane plantations in Guatemala.
- Compiled the final report detailing the results of the analysis using H&H models and GIS spatial analysis.

Ing. Fredy García Fuentes, Vía Bilbao #1 Col. Las Terrazas, Cdad. San Cristobal, Mixco, Guatemala

Feb. 2013 – Dec. 2014

Junior Civil Engineer - Supervisor

Mixco, Guatemala

- Supervised the maintenance of the principal and secondary roadways in the Municipalities of Sacatepéquez and San Marcos.
- Oversaw the construction of gabion walls for riverbank protection in Tiquisate and Chiquimula.

Municipality Government of Santa Catarina Pinula

Jul. 2012 – Feb. 2013

Junior Civil Engineer

Santa Catarina Pinula, Guatemala

- Collaborated on the design of municipal projects, including water supply systems for rural populations, small-scale sewage water treatment plants, schools, hospitals, parks, and roads

SKILLS

Software: R, Matlab, Python, HEC-RAS, HEC-HMS, EPANET, SWMM, HY8, ArcGIS, QGIS, AutoCAD Civil3D, SPSS/STATA, @Risk, DecisionTools, Photoshop, Premiere Pro/Express, Qualtrics, Office, Lucidchart, Canva, WordPress, Github, Gitlab.
Language: English (Proficient), Spanish (Native), Portuguese (Intermediate), Kaqchikel (Beginner).

ACADEMIC SERVICE

Latin American Studies Center , University of Maryland, College Park	Aug. 2018 - Present
<i>Graduate Student Committee Member / Mentor</i>	Maryland, USA
Latin American Studies Association	Aug. 2023 – May 2025
<i>LASA Central America Section Board Member, Student Representative</i>	Pittsburgh, USA / Remote

CONFERENCE PRESENTATIONS

Natural Hazards Center Researchers' Workshop , Researchers Meeting	July 2021
Natural Hazards Center Researchers' Workshop , Researchers Meeting	July 2022
Society for Risk Analysis Annual Meeting , Tampa Bay, FL	Dec. 2022
Natural Hazards Center Researchers' Workshop , Researchers Meeting	July 2022
Latin American Studies Association , Annual Congress	May 2023 & May 2025
Latin American Social and Public Policy Conference , University of Pittsburgh	March 2024
Central American Politics Consortium , Tulane University	Jan. 2024
ANS/ASME Joint Committee on Nuclear Risk Management Meeting , University of Maryland	Feb. 2025

CONFERENCE POSTERS

Natural Hazards Research Summit , Natural Hazards Engineering Research Infrastructure (NHERI)	Oct. 2022
American Society of Civil Engineers INSPIRE , 2023 Conference	Nov. 2023
Annual Symposium from the Department of Civil and Environmental Engineering , UMD, College Park	April 2024
Natural Hazards Research Summit , Natural Hazards Engineering Research Infrastructure (NHERI)	May 2024

INVITED TALKS AND WORKSHOPS

Latin American & Caribbean Studies Center , University of Maryland	Oct. 2021 & March 2022
Centro de Estudios Urbanos y Regionales (CEUR) , Universidad de San Carlos de Guatemala	May 2021 & Nov 2022
Instituto de Investigación en Ciencias Socio Humanistas , Universidad Rafael Landívar	Jan. 2024