Sergio A. García Mejía

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EDUCATION

University of Maryland, College Park — Summer 2025
Ph.D., Civil and Environmental Engineering, GPA: 3.44 — Maryland, USA
- NOAA Sea Grant Knauss Executive Fellow at the Bureau of Ocean Energy Management (2022-2023)
- Graduate Certificate in Latin American & Caribbean Studies (2024)

M.Sc., Civil and Environmental Engineering, Water Resources & Disaster Resilience Specialization — May 2020
- Fulbright Foreign Student Program Scholar (2018-2020) — Maryland, USA

Universidad de San Carlos de Guatemala — Aug. 2016
B.S., Civil Engineer (major) and Business Administration (minor) — Ciudad de Guatemala, Guatemala

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
Language: English (Proficient), **S**panish (Native), Portuguese (Intermediate), Kaqchikel (Beginner)

RESEARCH & TECHNICAL EXPERIENCE

University of Maryland, Department of Civil and Environmental Engineering (CEE) — Sep. 2020 – Present
Graduate Researcher Assistant, Ph.D. — Maryland, USA
- 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.
- Award: Weather Research Instrument Research and Data Publication from the Natural Hazards Center
- Publication: Garcia, Sergio; Ghosh, Nilanjana; Bensi, Michelle (2021) "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

Graduate Research Assistant, M.Sc. — Jan. 2019 – Aug. 2020
- Collected, digitized, and translated data from population and housing censuses of the last 50 years in Guatemala
- Analyzed 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.
- Publication: "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"
- Award: Residence at the Latin American Studies Center, University of Maryland (Jan 2020 – Aug. 2020)

Structural Extreme Events Reconnaissance (StEER) Network — Sep. 2021 – Present
Member / Virtual and Field Assessments Contributor — Remote / Global
- 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
John A. Knauss Fellowship, Bureau of Ocean Energy Management (BOEM) — Washington D.C., USA
- 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).

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

ACADEMIC SERVICE

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

ADDITIONAL AWARDS

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

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