

Patricia S. Carcamo, Ph.D, P.E.

Senior Staff Consultant



Dr. Patricia Carcamo is a Senior Staff Consultant for ESi's Structural and Civil Engineering Practice in the Atlanta office. She is a Geotechnical and Structural Engineer with over ten years of combined experience in design, analysis, and investigation, with a strong focus on earth retaining structures, seismic analysis, and both geotechnical and structural design. Dr. Carcamo conducts root-cause failure analysis, including site investigation of existing structures and soil/structure interaction analysis of structures such as retaining walls and foundations. Dr. Carcamo also performs detailed reviews of construction documents, construction materials, and construction practices.

Prior to joining ESi, Dr. Carcamo worked in Chile as a Structural Engineer, performing structural design and conducting bridge analysis-related research projects. Her work included monitoring seismic stations, conducting non-invasive surveys, and collecting data on bridge elements. Dr. Carcamo led both construction and design projects by coordinating multiple disciplines, managing schedules, budgets, and overseeing material testing to ensure successful outcomes for public and private sector projects. She also has experience in the geoenvironmental field, focusing on remediation projects, conducting geotechnical analysis, developing technical documents, and ensuring regulatory compliance.

Dr. Carcamo has experience in the retaining wall industry where she performed geo-structural analysis and design for transportation and commercial projects across several states. Her academic background includes a Ph. D in Geotechnical Engineering from Auburn University, where she researched seismic accelerometers and applied geophysical methods to characterize shear wave velocity at sites in Alabama.

Education

Ph.D., Geotechnical Engineering, Civil and Environmental Engineering, Auburn University

M.S., Structural Engineering, Civil Engineering, Austral University, Chile

B.S., Civil Engineering, Austral University, Chile

Contact Information

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ESi Atlanta

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Peachtree Corners, GA 30092

Areas of Specialization

- Design and Analysis
- Geotechnical Engineering
- Earth Movement, Landslides and Slope Stability
- Earth Retention Systems
- Geophysical Testing and Analysis
- Seismic Analysis
- Site Characterization
- Structural Engineering
- Construction Defects

Licenses & Certifications

- State of Georgia - PE License No. 255293
- State of Nevada - PE License No. 034224

Languages

- English
- Spanish

Positions Held

- **Engineering Systems Inc. (ESI), Peachtree Corners, Georgia**
Senior Staff Consultant, 2024 – Present
- **Earth Wall Products, Smyrna, Georgia**
Geotechnical and Structural Engineer, 2023 – 2024
- **Geosyntec Consultants, Kennesaw, Georgia**
Senior Staff Professional, 2022 – 2023
- **Hotel Villa del Rio, Valdivia, Chile**
Project Engineer, 2017 – 2018
- **Technical Education Center, Valdivia, Chile**
Project Manager, 2017 – 2018
- **Mariquina Municipality, San Jose, Chile**
Project Engineer, 2016 – 2016
- **Industrial Engineering Building, Valdivia, Chile**
Project Engineer, 2016 – 2017ing and Research
- **Auburn University**
 - Graduate Research Assistant, 2019 – 2022
 - Assessing Site Class Using Surface-Based Shear Wave Velocity Measurements, ALDOT, Dissertation Project.
 - Pharmacy Research Building. Vibration Testing for Laboratory Equipment
 - Landslide at Conecuh I-65 MP 87.4, ALDOT. Geophysical Investigation
 - AL-51 Bridge, ALDOT. Geophysical Investigation
 - SR-219 Landslide, ALDOT. Geophysical Investigation
 - Graduate Teaching Assistant, 2019 – 2022
 - CIVL-3310, Geotechnical Engineering I

- **Austral University**

- Research Projects, 2016 – 2018
- Chacao Bridge Seismic Analysis. Monitoring and Reporting of Seismic Activity of the Region.
- Cau-Cau Bridge Analysis. Non-invasive and Invasive Testing of Structural Elements.
- Paper and Pulp Building. Expansion Feasibility Analysis

Professional Affiliations/Honors

- American Society of Civil Engineers (ASCE), Member, 2019 - Present
- 100+ Woman Strong, Member, 2019 - Present
- Auburn Geotechnical Society (AGS), Founder, Member, 2020 – Present

Publications

“Development of a Slope Failure Database for Alabama Highways,” M. J. Knights, J. Montgomery, **P. S. Carcamo**, Bulletin of Engineering Geology and the Environment, 79(1), 423-438. 2020.

Presentations

“Where to Locate the Elastic Half-Space in Site Response Analysis. A Case Study Using Site Profiles from Charleston, South Carolina, USA,” A. Cabas; **P. Carcamo**, A. Rodriguez-Marek, B. Godfrey, B., G. Olgun, Second European Conference on Earthquake Engineering and Seismology, Istanbul. 2014.