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Wilson Espinoza

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EDUCATION

PhD in Civil Engineering, Georgia Institute of Technology. 08/2016-Present

Master of Science in Civil Engineering. Purdue University, West Lafayette, IN. 06/2014 - 08/2016

Master of Real Estate and Project Management. Universidad San Francisco de Quito and Universidad. Politécnica de Madrid. Quito, Ecuador. 09/2011 - 02/2013

- Dean's List.

Bachelor of Science in Civil Engineering. Pontificia Universidad Catolica del Ecuador. Quito, Ecuador. 10/2002 - 08/2009

- Basketball Athletic Scholarship.

CERTIFICATIONS AND AWARDS

Teaching Certificate, Center of Teaching and Learning, Georgia Institute of Technology. 12/2018 -12/2020

Future Faculty Fellows fellowship, Georgia Institute of Technology. 06/2020 - 06/2021

CEE Gateways to France fellowship, Georgia Institute of Technology. 08/2019 - 09/2019

Outstanding graduate fundamental research award, Georgia Institute of Technology. 02/2018

Graduate research Assistantship, Georgia Institute of Technology. 08/2016- Present

Scholarship for Advanced Education in Science, Technology and Innovation. Ecuadorian Ministry of Education. 05/2013 - 08/2016

International Exchange Program Scholarship. University of Oregon. 08/2010

RESEARCH EXPERIENCE AND THESIS PROJECTS

Temperature effects on the mechanical properties of geomaterials. Georgia Institute of Technology 08/2016 - Present

- Currently conducting research on temperature effects of granite and shale towards understanding rock fracturing applied to geothermal systems and gas and oil extraction.

Laboratory characterization of #2Q-ROK sand. Purdue University – West Lafayette, IN. 06/2014 - 08/2016

- Research regarding soil characterization and variation of particle breakage and strength parameters of sand at large strains.

Terrazas del Tennis Business Plan. Universidad San Francisco de Quito – Quito, Ecuador. 09/2011 - 02/2013

- Conducted real estate analyses regarding location, macroeconomics, microeconomics, cost and profit, marketing, and sales.

Soil Identification Software. Pontificia Universidad Catolica del Ecuador – Quito, Ecuador. 01/2008 - 08/2009

- Directed a project to develop a geographical soil identification interface with the support of private computer programmers and graphic designers.
- Collected, classified, validated and processed a database corresponding to 30 years of field and laboratory work performed by PUCE testing materials laboratory.

JOURNAL PUBLICATIONS

- Wilson F. Espinoza, Fengshou Zhang, Sheng Dai (2020). **Impacts of temperature on the mechanical properties of shale using instrumented indentation**: Geomechanics for Energy and the Environment (accepted with minor reviews). 08/2020
- Wilson F. Espinoza, Sheng Dai (2021). **Thermal degradation of mechanical properties of granite**. (drafted manuscript, ready to submit). 2021
- Wilson F. Espinoza, Sheng Dai (2021). **The nanoscale creep behavior of granite at elevated temperature**. (drafted manuscript, ready to submit). 2021

TEACHING EXPERIENCE

Teaching assistant. GT- 6000 Grad Groups Seminar, Georgia Institute of Technology. 06/2020-Present
- Currently advising graduate students on building community, building mentor/advisor relationships professional development, leadership, and diversity and inclusion (**Fall 2020 - Present**).

Instructor of record. COE - 3001 Deformable bodies, Georgia Institute of Technology 01/2020 - 04/2020
- Taught design of structural members subjected to multiple stress conditions (**Spring 2020**).

Teaching assistant. CEE- 4405 Introduction to Geotechnical Engineering, Georgia Institute of Technology 08/2018 - 05/2019
- Taught fundamental properties of geomaterials through experimental methods (**Fall 2018** and **Spring 2019**).

Vertically integrated program Instructor. Force transfer mechanisms, Georgia Institute of Technology 08/2018 - 12/2018
- Taught experimental methods to study force chains in granular systems (**Fall 2018**).

Adjunct professor. Structures and solid mechanics, Indoamerica University. Quito, Ecuador. 06/2013 - 06/2014
- Taught force systems, deformation of solids and introduction to structural analysis (**Fall 2013, Spring 2014** and **Summer 2014**).

Adjunct professor. Civil infrastructure design**,** Indoamerica University. Quito, Ecuador. 06/2013 - 06/2014
- Taught plumbing design, small electrical installations, quality control of construction materials and introduction to design of retaining structures (**Fall 2013, Spring 2014** and **Summer 2014).**

PROFESSIONAL EXPERIENCE

Project Supervisor. Testing Materials Laboratory, Pontificia Universidad Catolica del Ecuador. Quito, Ecuador. 06/2010 - 06/2014
- Supervised the construction process of **two thousand houses in a 30-block residential building project**, to include budgeting, quality control and project management.
- Analyzed reports of quality control of materials, performed project management analyses and supervised the construction process of all the residential complex facilities including; controlled excavations of foundations and slopes, retaining structures, reinforced concrete buildings, water supply and sanitary systems, fills and backfills, paved stone roads and sidewalks.

Project Manager and General Supervisor. Fundacion Cesal. Quito, Ecuador. 01/2011 - 01/2012
- Designed and built two city parks and their respective retaining walls, wooden structures, and slope-erosion remediation processes as a private contractor.

Project Supervisor. Constructora Tapia. Quito, Ecuador. 08/2009 - 06/2010
- Managed the construction process of a one-block area of a residential building project consisting of 104 houses.

Project Supervisor. Constructora Espíndola – Pazmiño**.** Quito, Ecuador. 04/2007 - 08/2009
- Assisted in the management of construction, budgeting, and quality control of a 10-story building project.

Technical Assistant. Testing Materials Laboratory, Pontificia Universidad Catolica del Ecuador, Quito, Ecuador. 06/2007 - 06/2008
- Compiled data to assemble a soil database, in which soils were classified by geographic location.

Project Assistant. Testing Materials Laboratory, Pontificia Universidad Catolica del Ecuador. Quito, Ecuador. 06/2006 - 06/2007
- Conducted and wrote analysis reports on building pathology.

PROFESSIONAL AFFILIATIONS

ACSE Georgia Chapter. 01/2016 - Present
Purdue Geo- Institute. 06/2014 - 08/2016
Association of Civil Engineers of Pichincha. 09/2011 - 09/2015
Project Management Institute. 09/2011 - 03/2012

SERVICE

University service

ASCE Geo-Institute/Georgia Tech Mentorship Series Program **(Founder/Director).**	04/2020 - Present
Georgia Tech - Diversity Ambassador.	08/2019 - 06/2020
Ecuadorian Student Organization (ESO-Gatech) **(Founder/President).**	01/2017 - Present
Georgia Tech Geo Society **(Vice-President).**	08/2016 - Present
Georgia Tech – Student Government Association (SGA – Gatech) **(Senator).**	08/2016 - 08/2018

Professional service

Ecuadorian Association of Scholars and Practitioners (EASP) **(Founder).**	01/2018 - Present
Ecuadorians at Tech **(Founder).**	08/2016 - Present
Ecuadorians at Purdue.	01/2015 - 08/2016