



Ronald Santiago

Education

- 2024–Present **PhD - Department of Mechanical Engineering**, *The University of Utah*, Salt Lake City, UT.
2022–2024 **Data Analytics**, *Ensign College*, Salt Lake City, UT.
2021–2021 **Mathematics - Pedagogical Training**, *Universidade Cruzeiro do Sul*, Brasilia, DF, Brazil.
2009–2015 **Electrical Engineering**, *Universidade de Brasilia (UnB)*, Brasilia, DF, Brazil.
Medical Images - Department of Electrical Engineering
Scientific Initiation Program - Guiding Professor: Dr. Flavia Oliveira, Project: *The Heart and Circulation: Mathematical Models for Simulation and Learning*

Experience

Research Experience

- 2025–Present **Graduate Research Assistant**, *Multiscale Mechanics & Materials Lab*, Department of Mechanical Engineering, The University of Utah.
◦ Supervisor: Dr. Ashley Spear
- 2024–2025 **Graduate Research Assistant**, *Integrated Multi-Physics Lab*, Department of Mechanical Engineering, The University of Utah.
◦ Porous media: structure-property relationship across multiple length/temporal scales
◦ Experimental laboratory work involving advanced microscopy and micromechanical characterization:
– Scanning Electron Microscopes (SEM, BSE, EDS) with sample coating using Leica EM ACE600
– Optical microscopy using Olympus LEXT OLS5000
– Laser marking with EzLaze 3 Laser Cutting System
– Nanoindenter (Hysitron TI Premier) with heating stage up to 800°C
◦ Micromechanical investigation of granite, limestone, and clay under coupled thermal and saturated conditions

Teaching Experience

- 2022–2023 **Math Tutor**, *Ensign College*, Salt Lake City, UT, USA.
◦ Designed and delivered individualized lesson plans for about 60 students of intermediate and advanced math classes, resulting in an increase of average grades.
◦ Adapted math lessons for students with emotional blocks, resulting in a decrease of de-lists across all math classes in 2022 by 10
- 2009–2022 **Private Math and Physics Tutor**, Brasilia, DF, Brazil.
◦ Provided personalized math and physics tutoring sessions to more than 50 students of varying levels, focusing on strengthening core concepts and preparing for high-level university admission exams such as Brazil's *vestibular*.

Work Experience

- 2015–2022 **Advisor**, *National Oil Agency*, Brasilia, DF, Brazil.
◦ Promoted to Advisor in June 2019, overseeing a team of 12 direct reports.
◦ Streamlined processes for 12 employees to improve efficiency and productivity, resulting in cost savings for the company.

Presentations

Conference Posters:

1. **Santiago R.***, and Newell P., *Nano/micromechanical Characterization of Biopolymer-Enhanced Soils*, *Solid Mechanics Poster Day*, University of Utah, October 2024.

Awards

- 2024 Academic Merit Scholarship – Ensign College (GPA-based award, Salt Lake City, UT, USA)
- 2023 Ballard Leadership Scholarship – Ensign College (Acknowledged for leadership and service qualities, Salt Lake City, UT, USA)
- 2014 Project selected for the Scientific Initiation Program – Guiding Professor: Dr. Flavia Oliveira, Project: *The Heart and Circulation: Mathematical Models for Simulation and Learning* (Brasília, Brazil)
- 2013 Honorable Mention – XI Electrical Engineering Week – University of Brasilia (Developed a rotating robot for speaker directivity data acquisition, Brasilia, Brazil)
- 2004 Two-time Math Olympiad Champion (1st Place among all state high school students, Espirito Santo State, Brazil)

Computer skills

MatLab Coding, Data Modeling & Analysis, Structured Query Language (SQL), Data Visualization (Tableau, Power BI), \LaTeX , Python

Languages

English **Proficient**
Portuguese **Native**
Spanish **Beginner**

Interests

- Soccer, Jiu-Jitsu, Hike, Piano