

António Ferreira

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EDUCATION

Georgia Institute of Technology

Bachelor of Science in Materials Science & Engineering | Major GPA: 4.0 | GPA: 3.95

Master of Science in Materials Science & Engineering | GPA: 4.00

Atlanta, GA

May 2025

May 2026

WORK EXPERIENCE

Materials Engineer Intern – Framatome

May 2025 – August 2025

Lynchburg, VA, USA

- Automated irradiation embrittlement and fracture mechanic calculations (ART, USE, PTS, UCC) for Pressure-Temperature safety curves
- Evaluated corrosion of reactor materials under primary water conditions to support component integrity assessments

Materials Engineer Intern – COBOD

May 2024 – August 2024

Copenhagen, Denmark

- Led the development of a novel insulating material and its delivery system for 3D printing technologies
- Fabricated and tested cement-based materials, and 3D printed large-scale concrete structures

Research Intern – Institute of Computational Physics, ZHAW

May 2023 – August 2023

Winterthur, Switzerland

- Performed extensive optical and drift diffusion simulations of DBRs applied to Perovskite Solar Cells
- Measured the External Quantum Efficiency and J-V curves of Building Integrated Photovoltaics

RESEARCH EXPERIENCE

Researcher – Prof. Aaron Stebner Lab

September 2023 – Present

Atlanta, GA, USA

- Performing microstructural and chemical analysis of Wire-Arc Additive Manufactured (WAAM) NiTi SMAs
- CASmart 6th Student Design Challenge: fabricated elastocaloric NiTiCu SMAs, tested and characterized materials with DSC, SEM, cyclical compression, and presented research findings at SMST 2024
- Optimized ultrasonic atomization of metal powder, impurity detection and reduction, for feedstock on demand

Researcher – Prof. Natalie Stingelin Lab

August 2021 – September 2024

Atlanta, GA, USA

- Fabricated and optimized polymer based thin films, distributed Bragg reflectors and optical microcavities
- Wrote MATLAB and Python programs for data analytics, optical simulations and modeling, and experiment design

LEADERSHIP EXPERIENCE

Teaching Assistant – Materials Selection and Design

August 2025 – Present

Atlanta, GA, USA

- Assist students in an advanced Material Selection and Design course using Ashby's method and Ansys software

Teaching Assistant – Chemical Thermodynamics of Materials

August 2023 – May 2025

Atlanta, GA, USA

- Assisted 125+ students in core MSE course; explained thermodynamic concepts and graded assignments

CTO - The Materials Innovation and Learning Laboratory (The MILL)

September 2021 – January 2024

Atlanta, GA, USA

- Oversaw characterization team, enhanced staff/user experience, procured equipment, and managed the laboratory
- Trained students on optical and electron microscopy, optical profilometry, infrared spectroscopy, XRD, and XRF

AWARDS and PUBLICATIONS

- 2024 Outstanding Teaching Assistant for School of Materials Science and Engineering
- ThinkSwiss Research Scholarship, 2023
- 1st Place Undergraduate Research Poster, MRS (2022, Georgia Tech MSE)
- V. Quirós-Cordero, A. Balzer, S. Bachevillier, N. Watkins **A. Ferreira**, J. Mushyakov, M. Dhoot, C. Silva-Acuña, P. Stavrinou, N. Stingelin. "A Versatile Materials Class for Solution-Processed Optics and Photonics Based on Titanium Oxide Hydrates and Polyalcohols: A Perspective." Manuscript submitted to *Advanced Materials*.

SKILLS

Software: MATLAB, Python, Javascript, CAD (Solidworks, NX), Git, DVC, Webdev, CI/CD, Excel

Machine Learning: Deep learning (U-Net, CNN) for image segmentation and materials property prediction; experience with dimensionality reduction, regularization, and hyperparameter tuning

Lab Skills: SEM, DSC, XRD, XRF, FTIR, UV-Vis, Profilometry, Metallography, Vacuum Arc Melting, Wire EDM