

# HUGO ONGHAI

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## EDUCATION

### Cornell Tech, Cornell University

New York, New York

*M. Eng. in Electrical and Computer Engineering*

*Expected June 2026*

- GPA: 4.0/4.0
- Admissions Office Student Ambassador and Recipient of Cornell Tech Merit Scholarship

### University of California, Los Angeles (UCLA)

Los Angeles, California

*B.S. in Materials Engineering (Concentrations: Electronic Materials and Math of Computation)* September 2022 – June 2025

- Cumulative GPA: 3.975/4.0; summa cum laude; 5x Dean's Honor List
- Recipient of Chin Family Endowed Engineering Scholarship (2024), Knapp Scholarship for Ceramics Studies (2023)
- Relevant Coursework: Machine Learning for MSE, Computer Methods of MSE, Honors Proof-Based Linear Algebra

## WORK EXPERIENCE

### Materials Project

Lawrence Berkeley National Lab, California

*Software & Database Engineering Intern*

*June 2025 – August 2025*

- Rebuilt the MPCite package using Python and MongoDB to orchestrate the submission and documentation of DOI numbers as released by the U.S. Department of Energy's Office of Science and Technology Information

### Cedar Hill Cemetery

Port Jefferson, New York

*Gravedigger and Grounds Laborer (Seasonal)*

*August 2023 – June 2024*

- Performed over 20 funeral and burial services in first 2 months
- Learned to help people during their hardest times in life and in moments of great emotional distress

## RESEARCH

### Ab Initio Simulations Lab @ UCLA

Los Angeles, California

*IBM Research Scholar*

*September 2023 – June 2025*

- Awarded competitive scholarship from IBM to conduct undergraduate research, through the Semiconductor Research Corporation Undergraduate Research Program
- Writing in-house scripts for MSPARC, a real space density functional theory package for MATLAB, to better analyze band structures of exotic electronic materials

### Institute for Biological Information Processing (Bioelectronics)

Forschungszentrum Jülich, Germany

*DAAD RISE Intern*

*June 2024 – September 2024*

- Awarded competitive scholarship to research at Forschungszentrum Jülich, one of Europe's largest research centers
- Demonstrated a greatly improved accelerated aging tests process and setup on 3D-printed, flexible neural implants
- Performed electrochemical impedance spectroscopy, charge injection capacity testing, and data analysis with galvani, Matplotlib, seaborn, NumPy, and pandas

### Center for Thermal Spray Research at Stony Brook University

Stony Brook, New York

*Research Intern*

*July 2022 – August 2022*

- Studied the relationship of spray coating stiffness, porosity, and processing parameters via impulse excitation technique
- Visualized crack propagation and strain in spray-coated samples undergoing three-point bend testing with MATLAB

### Nagan Research Lab

Stony Brook, New York

*Simons Fellowship Research Intern*

*June 2021 – August 2021*

- Analyzed evolving torsion bond-angles of RNA structures to characterize molecular dynamics simulation performance
- Gained valuable experience with AMBER simulation, Jmol visualization, and remote Linux systems
- Co-authored: Linzer et al., [Accurately Modeling RNA Stem-Loops in an Implicit Solvent Environment](#), J. Chem. Inf. Model, 2024

### Garcia Center for Polymers at Engineered Interfaces

Stony Brook, New York

*Garcia Research Scholars Summer Intern*

*June 2020 – September 2020*

- Analyzed AFM and CV data of gold thin-films on silicon wafers as potentiometric biosensors
- Awarded "Most Outstanding Exhibit in Material Science" distinction by American Materials Society

## LEADERSHIP & INVOLVEMENT

### Materials Research Society at UCLA

Los Angeles, California

*Historian and Web-Dev Team Member*

*May 2023 – June 2024*

- Served as sole editor, writer, and designer for quarterly alumni newsletters and professor interview series
- Learned WordPress to design a new and streamlined organization website
- Established new LinkedIn group, so far connecting 100 alumni, students, and faculty in its first year

### UCLA Women's and Men's Volleyball Production Team

Los Angeles, California

*Student DJ/Audio Engineer*

*September 2023 – April 2024*

- Curated, played, and remixed music for UCLA D1 Men's and Women's Volleyball Home Games