Shalayah-Naomi Webb

nwebb2541@sdsu.edu ❖ (619) 578-3185 ❖ San Diego, CA

EDUCATION

San Diego State University (SDSU) **May 2026**
Bachelor of Science, Aerospace Engineering *San Diego, CA*

- Transferring as an SDSU STEM Pathways Scholar in Fall 2023
- Accepted into Mathematics, Engineering, Science Achievement (MESA) program in Fall 2023

San Diego City College **May 2023**
Associate of Science, Engineering, Earth and Physical Sciences, Mathematics *San Diego, CA*

- President of San Diego City College SACNAS (Society for the Advancement of Chicanos and Native Americans in Science) 2022-2023
- Member of MESA (Mathematics, Engineering, Science Achievement) Program 2019-2023
- Awarded $250 Jim Sinegal scholarship in Spring 2023
- Awarded $1,000 San Diego City Foundation scholarship in Fall 2022
- Dean's List 2019

RESEARCH EXPERIENCE

San Diego State University Aerospace Structures Lab **June 2023 – July 2023**
Undergraduate Researcher *San Diego, CA*

- Used MATLAB scripting to construct preliminary models of aerospace structure of interest
- Converted MATLAB script into Python to generate models with finite element analysis (FEA) software Abaqus
- Learned to use Abaqus to analyze compression response in aerospace structures with prescribed geometric deformations
- Documented research work in writing and weekly presentations
- Prepared and presented original oral presentation, "*Parametric Study of Honeycomb Core Geometries and the Interactions on Compression and Shear Loading"* to SDSU faculty and company

Cornell University Astronomy Research Experience for Undergraduates **June 2022 – August 2022**
Undergraduate Researcher *Ithaca, NY*

- Tested and verified commercial capacitive sensor for instrument Epoch of Reionization Spectrometer (EoR-Spec)
- Learned how to operate Helium-Neon laser to conduct tests on Fabry-Perot Interferometer
- Performed independent data recording and data cleaning using Excel
- Qualitatively evaluated measurements from laser with capacitive sensor to verify precision of interferometer, seeking consistency between the two using visualization techniques in Python on platform Jupyter Notebook
- Developed and presented original poster presentation, *"Exploring the Epoch of Reionization: Verifying a Capacitive Displacement Sensor for the EoR-Spec on FYST" t*o Cornell faculty and company upon completion of internship

Draper Laboratory **June 2021 – August 2021**
Guidance, Control, & Navigation (GNC) Intern *Cambridge, MA*

- Processed and analyzed sensor data for GPS IMU sensor for hypersonic aircraft
- Applied processing and graphing techniques in MATLAB to discern patterns from sensor data and verify accuracy to real-world location points

- Initiated conversation with customer on sensor data, helped to restart conversation on CONOPS of GPS testing for aircraft
- Left tools for processing future test data and documentation on how to use them
- Used Simulink to begin preliminary modeling of GPS blackout scenarios in flight software

NASA/MSFC Proposal Writing & Evaluation Experience (NPWEE) **September 2020 – November 2020**
NPWEE Scholar
- Participated in and learned from weekly lectures how to develop proposal idea into viable product for government funding
- Learned how to patent, create a New Technology Report (NTR)
- Served as Primary Reviewer of proposal assigned in reviewing process

NASA Community College Scholars (NCAS) **June 2019 – September 2019**
NCAS Scholar *Pasadena, CA*
- Completed required coursework during Summer 2019, delivered final essay, "Habitation Systems and Concept Studies."
- Participated in four-day educational experience at the Jet Propulsion Laboratory (JPL) in Pasadena, CA
- Served as Project Manager of team
- Collaborated with team to create and program a LEGO Mindstorms rover that successfully completed an obstacle course
- Presented final presentation on work accomplished with team members for a panel of judges

PRESENTATIONS

"Exploring the Epoch of Reionization: Verifying a Capacitive Displacement Sensor for the EoR-Spec on FYST," *American Astronomical Society (AAS) 241*. Seattle Convention Center, Seattle, WA. January 2023.

"Exploring the Epoch of Reionization: Verifying a Capacitive Displacement Sensor for the EoR-Spec on FYST," *American Physical Science (APS) April Meeting*. Hilton Minneapolis, Minneapolis, MN. April 2023.

LEADERSHIP EXPERIENCE

San Diego City College SACNAS **November 2019 – May 2023**
President 2022-2023, Secretary 2021-2022, Inter-Club Council Representative 2019-2021 *San Diego, CA*
- Represented SACNAS chapter before U.S. Trade Relations delegation and San Diego Community College District CEOs to speak about community college benefits and experiences
- Elected as Chapter President for the 2022-2023 academic year
- Served as Secretary. Previously responsible for recording minutes and distributing in a timely fashion and corresponding with local and national organizations.
- Hosted workshop, *"Membership Recruitment & Retention"*, at 2021 National SACNAS Conference
- Volunteered at SACNAS outreach events, such as teaching K-12 students concepts in physics and demonstrating experiments to encourage interest in science
- Fundraised and earned over $2000 for conference travel, equipment, and t-shirts for club members

TEACHING, VOLUNTEERING

San Diego City College Math Center **November 2019 – Present**

Advanced Math Tutor *San Diego, CA*

- Assists community college students with college-level mathematics courses, specifically College Algebra, Trigonometry, Precalculus, Calculus I, II, & Linear Algebra
- Helped students with comprehension, analyzing and improving weak points, and successfully completing homework with a grade of A
- Coordinated with math professors to host workshops for exam practice and preparation

Braille Institute **January 2017 – August 2018**

Volunteer *San Diego, CA*

- Assisted and taught the visually impaired and elderly on how to use electronics such as iPhones and iPads
- Organized and instructed a classroom in physical activity
- Performed clerical duties, such as answering the phone, filing, typing, sorting mail, and mailing out materials

AFFILIATIONS & MEMBERSHIPS

SDSU STEM Pathways Program **February 2022 – Present**

- Participated in SDSU Engineering research internship for Summer 2023, stipend of $4,000 awarded
- Assigned and connected to mentors including SDSU and San Diego City College faculty
- Engaged in program workshops and enrichment activities geared towards personal and professional development in the STEM field

Patti Grace Smith Fellowship **March 2021 – August 2021**

- Chosen as member of inaugural class of 2021 through competitive application and interview process
- Assigned and connected with peer and industry mentor
- Received $3,000 in scholarship grant
- Collaborated with fellows on team project and presented at the 2021 Patti Grace Smith Fellowship Summit

SKILLS & INTERESTS

- **Skills:** MATLAB, Python, Microsoft Excel, Solidworks, Abaqus
- **Interests:** Hiking, reading, embroidery, collecting films, collecting vinyl records