Daniel Gu

Callsign: KD2OHT

U.S. Citizen

(845) 507-3235, dangu@umich.edu

Education

University of Michigan – Ann Arbor, MI; M.Eng in Space Engineering; 4.00/4.00 *Expected Dec 2021*
B.S.E in Aerospace Engineering; 3.01/4.00 *Dec 2020*

Technische Universität (TU) Berlin – Berlin, Germany; Renewable Energy Case Study (Study Abroad) *Jul – Aug 2017*

Work Experience

Satellite Test Engineering Intern – Blue Canyon Technologies, a Raytheon Company *May 2021 – Aug 2021*
Ref: May Rosekrans, mrosekrans@bluecanyontech.com *Boulder, CO*

- Interpreted board schematics to develop functional test procedures and enable automated checkouts, weekly Microsat bus production
- Designed new automated TVAC control system
- Developed and executed TID radiation test procedures

Systems and Test Engineering Intern – Astranis Space Technologies *May 2020 – Aug 2020*
Ref: Rico Walker, rbwalk@gmail.com *San Francisco, CA*

- Developed and executed HALT/HASS thermal test procedures for CTE mismatch testing
- Created spacecraft-level failure mode effects & criticality analysis (FMECA) for risk burndown/degraded sat ops
- Spearheaded logistics and streamlined qualification testing processes for flight-unit hardware

Electrical Engineering Intern – Northrop Grumman Innovation Systems *Jun–Aug 2018; Jun–Aug 2019*
Ref: Michael Meyers, michael.meyers@ngc.com *Gilbert, AZ; Dulles, VA*

- Designed, built, and tested an emergency power cutoff (EPO) system for solar panel/battery charge test rack
- Determined root cause of failure for malfunctioning power distribution board
- Produced card-level first article testing procedures for a national security program
- Performed component-level worst case analyses and failure mode effects analysis for multiple cards
- Executed derating stress analyses and assessed risk of parts that fell out of qualification ranges

Spacecraft Bus Lead – Michigan Exploration Laboratory (MXL) *Jan 2020 – Present*
Ref: James Cutler, jwcutler@umich.edu *Ann Arbor, MI*

- Leading MARIO CubeSat build, integration and test for a team of 9 students
- Provided technical advisement and instruction on various spacecraft bus and payload tasking to teammates

Electrical Power Systems (EPS) Lead – Michigan Exploration Laboratory (MXL) *Jan 2018 – Jan 2020*

- Refined electrical design to support additional battery packs and solar panels and accommodate new power requirements
- Developed feasible design improvements to increase the capability of future iterations of the EPS system
- Prototyped a supercapacitor-based power system for an optical ground tracking payload

Research Assistant – Michigan Exploration Laboratory (MXL) *Jan 2017 – Jan 2018*

- Built, integrated and tested both engineering and flight unit hardware for TBEx CubeSats
- Coordinated launch logistics and secured funding ($5500+) to participate in NASA's Eclipse Ballooning Project

Leadership Experience

American Institute of Aeronautics and Astronautics (AIAA) – Vice President of Events *2017 – 2019*
Ann Arbor, MI

- Organized all major AIAA events, company tours, and corporate visits
- Headed 15-person week-long trip to SciTech 2019 conference in San Diego

Conferences/Publications

- Seitzer, P., Schachter, J., Szczerba, M., **Gu, D.**, et al., Optical Tracking and Attitude Determination of LEO CubeSats with LEDs: A Balloon Demonstration. 2018 AMOS Technologies Conference, Maui Economic Development Board, Maui, Hawai`i, 2018. *2018; Maui, HI*

Skills

Software – Experienced: Altium Designer, MATLAB/Simulink, LaTeX, Autodesk Inventor/AutoCAD, Microsoft Office
Software – Basic: LTSpice, OrCAD, Python, C/C++, Git, Bash, AGI STK (Lvl. 1 Cert), CATIA/STARCCM+