Daniel Gu

Callsign: KD2OHT

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

Education

University of Michigan – Ann Arbor, MI; B.S.E in Aerospace Eng, Minor in Electrical Eng *Expected Apr 2020*

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

Work Experience

Northrop Grumman Innovation Systems – Electrical Power Subsystem (EPS) Eng Intern *Jan 2017 – May 2017*

- Performed component level failure mode effects analyses for encryption board for a comms sat *Gilbert, AZ*
- Developed documentation for a worst case analysis for motor board for Mission Extension Vehicle (MEV)
- 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
- Authored procedures for assembly and operation of EPO system
- Consulted with vendors in support of Electronic Ground Support Equipment (EGSE)

Michigan Exploration Laboratory (MXL) (ref: James Cutler, jwcutler@umich.edu) *Jan 2017 – Present*

EPS Lead *Ann Arbor, MI*

- Refined current electrical design to support additional battery packs and solar panels to accommodate new power requirements
- Developed feasible design improvements to increase the capability of future iterations of the EPS system
- Prototyped a power system for an optical ground tracking payload tested on a high-altitude balloon platform
- Delegated tasks for MARIO CubeSat build, integration and test

Research Assistant

- Provided technical advisement and instruction on various tasking to teammates
- Built, integrated and tested both engineering development and flight unit hardware for TBEx CubeSats
- Performed trade study to determine the most cost-effective PCB panelization for procurement
- Authored and performed board validation procedures for TBEx flight units
- Debugged existing engineering development processes
- Developed faster and more reliable lab board population processes (solder paste stencils + reflow oven)
- Coordinated launch logistics and secured funding ($5500+) for NASA's 2017 Eclipse Ballooning Project

Recon Industrial Controls Corporation – Engineering Intern (1day/wk) *Sept 2015 – Jun 2016*

- Evaluated various methods for a wireless serial link to proprietary LabRecon board *Englewood, NJ*
- Ported LabRecon software to Linux using the WINE environment
- Helped develop LabRecon educational robotic platform

Leadership Experience

American Institute of Aeronautics and Astronautics (AIAA) – Vice President of Events *2017 – Present*

- Organized all major AIAA events, company tours, and corporate visits *Ann Arbor, MI*
- Headed 15-person weeklong trip to SciTech 2019 conference in San Diego
- Planned career building events with industry

hackBCA – Chief of Staff *2014 – 2016*

- Coordinated staffing and day-of logistics for high school hackathon with 650+ attendees *Hackensack, NJ*

Conferences/Publications

Committee on Space Research (COSPAR) 42nd Assembly *2018*

- Presented PHAROS LED payload test flight data and results *Pasadena, CA*

2018 AMOS Technologies Conference *2018*

- 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. *Maui, HI*

Skills

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