

TALISHA GRIESBACH

University of British Columbia ECE Master's Student (Power Electronics) | Prev **EE Intern @ Google X**
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SKILLS

- **Software:** C#, C/C++, MATLAB, Python
- **Electrical:** Circuit Design, Rigid-Flex PCB Design, Altium, LTSpice, PSIM, Cadence, standard lab tools and skills (soldering (SMD, microscope), oscilloscopes, multimeters, signal generators)

EDUCATION

University of British Columbia, Master of Applied Science, Electrical Engineering Sept 2023 – Present

- **R&D of software** for an intelligent reconfigurable energy system of power electronics devices

University of British Columbia, Integrated Engineering (BASc) Sep 2018 – May 2023

- **Multiple scholarships and leadership positions**, including Wesbrook Scholarship, HSBC Emerging Leader, CEMF British Columbia Ambassador and Scholar, UBC Supermileage Team Lead, UBC IEEE Women in Engineering Chair
- **Courses:** Coding in C (94%), Linear Circuits (98%), Digital Systems & Microcomputers (91%), Electromechanics (97%), Power Electronics (84%), Analog CMOS IC Design (98%)

TECHNICAL EXPERIENCE

Graduate Research Assistant, UBC, Martin Ordonez Power Lab Nov 2023 – Present

- Research focused on creating control software for reconfigurable energy systems (RES) to maximize energy reliability, load management and failure detection.
- Designed and implemented CANopen protocol classes in C# utilizing Object-Oriented Programming (OOP) to facilitate communication within an energy system device network.

Electrical Engineer Intern, Google, X, Everyday Robots: Rigid-Flex PCB, Circuits May 2022 – Aug 2022

- Designed a large, irregularly shaped, custom 6-layer Rigid-Flex PCB with numerous ICs, sensors, analog and digital signals using best practices for rigid-flex layout, DFM and DFX, resulting in a reduction of manufacturing part count and assembly line issues
- Created and proved the success of a test PCB containing three on-board novel prototype circuits for motor braking, resulting in a new and improved braking mechanism

Electrical Lead, Supermileage Design Team UBC: Altium, Circuit & PCB Design Sep 2019 – Apr 2023

- Created electrical system of the first fuel cell vehicle, with features including oxygen pump control, voltage and current monitoring, emergency braking and wireless communication
- Designed a custom brushless motor and steering interface system using Altium, STM32, C++, Mbed OS and CAN bus for the Urban Electric vehicle for Shell Eco-Marathon 2022

Robotics Engineer Co-op, A&K Robotics: Electromechanics, C/C++, Linux, Bash May 2021 – Sep 2021

- Designed a buck converter PCB to step 36V down to 5V and 8A from ideation to completion independently, resulting in efficiency gains and a 200% increase in robot power capacity
- Implemented circuit and PCB improvements to the robot's power protection and thermal performance
- Utilized Arduino and C/C++ for sensor development, testing, and CAN bus communication verification

Electrical Test Engineer Co-op, Kardium: Electrical and Software (C#, MATLAB) May 2020 – Dec 2020

- Designed and fabricated circuits, PCBs and jigs to automate product testing, resulting in decreases in testing times ranging from 40% to 80% among 4 test protocols
- Developed automated testing applications using MATLAB and C# to decrease manual testing time by 70%, laying the foundations for a long-term plan of an automated testing environment
- Translated biomedical design standards (IEC 60601, AAMI, ANSI) into detailed test protocols

LEADERSHIP & NON-TECHNICAL EXPERIENCE

Institute of Electrical and Electronics Engineers, UBC Chapter, Vancouver

Sep 2021 – Apr 2022

Chair of Women in Engineering Society

- Plan events for women in engineering under IEEE, most notably a workshop and panel discussion on allyship in the engineering community
- Liaison with volunteers and other IEEE members to maximize IEEE impact on campus

Alpha Gamma Delta, Delta Zeta Chapter, Vancouver, BC

Sep 2019 – Present

Vice-President of Membership Experience, Recipient of the Multiple Scholarships

- Initiated a Mentorship Program with the Alumni chapter to increase the career-readiness of members
- Represented UBC's Chapter in Alpha Gamma Delta International's Service Learning Immersion Trip to New Orleans, LA, in January 2020 in addition to supporting many other philanthropy events

Marketing and Communications Assistant, Vancouver, BC

Sep 2021 – Apr 2022

UBC Faculty of Pharmaceutical Sciences

- Design graphics for use in digital and print marketing, using Adobe Illustrator and InDesign.
- Assisted in daily tasks, such as photography and newsletters, and special projects such as brand videos and yearly publications.

Project Patch, Enactus UBC, Vancouver, BC

Sep 2018 – April 2021

Advisor, Founder, Ex-Project Director

- Founded Project Patch: a social enterprise to provide blankets for the homeless, exercising courage, foresight and problem-solving
- Directed a team of 5 organizers and many volunteers using leadership, communication, collaboration and entrepreneurial skills to ensure both revenue and community goals are met, propelling Patch's growth

UBC Collegia Program, Vancouver, BC

Aug 2019 – April 2020

Collegia Advisor

- Conducted campus tours, community building activities, and liaised with faculty and staff in welcoming 20 new students as a JumpStart Orientation Leader, enhancing my supervisory skills and awareness
- Sharpened my aptitude to connect with people, empathy and conflict resolution skills through mentoring first-year students, therefore supporting them in navigating challenges in university

AWARDS & SCHOLARSHIPS HIGHLIGHTS

UBC Faculty of Applied Science Graduate Studies Award – \$2000 CAD

2024

Electro-Federation Canada Scholarship 2020, 2021, 2022 – \$1750, \$5000, \$3500 CAD

2020-2022

Alpha Gamma Delta Foundation Scholarships – \$1000, \$1000, \$1000 USD

2020-2022

Margaret E. Barr Bigelow Memorial Scholarship – \$2025 CAD

2022

IKB One World Scholarship and CIE Exchange Scholarship – \$2000, \$1000 CAD

2022

IEEE Vancouver Section John S. MacDonald Award – \$1500 CAD

2022

Engineering Undergraduate Society Community Contribution Award – \$1000 CAD

2021

Wesbrook Scholarship (*UBC's most prestigious designation, given to 20 students with outstanding academic performance, leadership, involvement in student and community activities*) – **\$2000 CAD**

2021

HSBC Emerging Leader Scholarship – \$5000 CAD

2021

UBC Sororities Top Panhellenic Scholar (*Member GPA ranked 1/600*) – **\$200 CAD**

2021

Alpha Gamma Delta Award (UBC) – \$6450, \$6400 CAD

2020, 2021

Donald J. Evans Engineering Scholarship – \$2000 CAD

2020

Trek Excellence Scholarship – \$1500 CAD

2020

Canadian Engineering Memorial Foundation Ambassador Scholarship – \$5000 CAD

2020