

Tina Belcher

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HIGHLIGHTS OF QUALIFICATIONS

- Currently enrolled in level 4 of the Engineering Physics co-op program, with a focus on nuclear physics
- Adept in data analysis, software applications and computational methods using Microsoft Excel and MATLAB through experience as a research assistant
- Excellent teamwork, communication, and interpersonal skills developed through work as a Teaching Assistant as well as Engineering extracurricular leadership activities

EDUCATION

Bachelor of Engineering, Engineering Physics
McMaster University, Hamilton ON

Expected Graduation Apr. 2019

- Achieved a cumulative grade-point average of 3.7/4.0

EXPERIENCE

Control Technologies Engineering Student
Hatch, Mississauga ON

May – Aug 2018

- Engaged in the research and development of smelting furnace power control systems
- Performed an investigation on fibre optic direction for use in a rotational counter
- Edited the programming and human-machine interface of a furnace power control auditing tool using LabVIEW – tested the software to find and eliminate program errors
- Executed a study on several methods of power control for electric arc smelting furnaces to establish a technical foundation for future furnace control system developments
- Created circuit simulations of smelting furnace systems to evaluate furnace power calculation methods

Teaching Assistant, Engineering Design & Graphics
McMaster University, Hamilton ON

Sept 2017 – Present

- Assisted students in using Autodesk Inventor during labs
- Invigilated in-lab tests, graded CAD designs & 3D projection sketches
- Supported students in their roles as project leaders and in technical portfolio development

Undergraduate Research Assistant, Department of Engineering Physics
McMaster University, Hamilton ON

May – Aug 2017

- Assisted graduate students in obtaining experimental data related to the flow inside of a scaled down CANDU calandria using a class IV PIV laser system
- Created and documented a comprehensive LabVIEW script for the calandria test section;
- Communication was established between different devices within the test section in an effort to obtain relevant data
- Conducted quality assurance tests and wrote corresponding measurement standard operating procedures (SOP)

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- Received practical experience in MATLAB, NI LabVIEW, Computational Fluid Dynamics (CFD), Experimental Fluid Dynamics, and Heat Transfer

ACADEMIC PROJECTS

Autonomously Operational Quadcopter

Grade Received: A

- Collaborated in a team of 4 peers to design, build, and implement a quadcopter that could fly through, film, and map an enclosed area autonomously, while staying within a limited budget

3D Interior Mapping

Grade Received: A+

- Worked in a team of 3 to develop a 3D mapping solution for interior locations
- Employed active stereoscopic vision and triangulation using webcams, lasers, and raspberry pi
- Device takes distance data points from a projected pattern and scans 360°

SKILLS

Software:

- Proficient with LabView, MATLAB, Maple, Autodesk Inventor, Flex PDE
- Experience using Python, C, Java, Assembler, Microsoft Excel

Laboratory:

- Completed class IV laser and WHMIS safety training courses
- Standard First Aid and CPR Level C certified

EXTRACURRICULAR ACTIVITIES

Director of Programming | Conference on Diversity in Engineering 2017

2017 – Present

Canadian Federation Engineering Students

- Organized 3 days of sessions and programming for 150 delegates from across Canada
- Connected and coordinated with over 45 individuals and organizations to develop workshops, sessions and keynote talks on a wide range of topics on Diversity in Engineering

Engineering Physics Ambassador

2016 – Present

- Leading role in departmental recruitment and marketing events; answered student questions, led tours, and presented at information sessions events

McMaster Engineering Welcome Week Leader

2016

- Represented McMaster Engineering in the setup and participation in all welcome week activities and initiatives
- Acted as a role model and friend for first years during the welcome week and throughout the school year