Tina Belcher

905 – 525 – 9140 • belchert@mcmaster.ca • Linkedin.com/in/belchert

Highlights of Qualification

- Level 4 Engineering Physics Co-op student with a focus in nuclear physics
- Adept in data analysis, software applications and computational methods using Microsoft Excel and MATLAB through experience as an academic research assistant
- Excellent teamwork, communication, and interpersonal skills developed through work as a Teaching Assistant in addition to Engineering extracurricular leadership activities

Education

Bachelor of Engineering, Engineering Physics   Sept 2019 - Present

McMaster University, Hamilton ON

Principles of Nuclear Engineering (Grade Received: A-)

- Investigated the system-level interdependence between nuclear technologies and its human-system contexts
- Construct systems architecture of how nuclear power plants are designed and operated

Experience

Control Technologies Engineering Student   May 2020 – Aug 2020

Hatch, Mississauga ON

- Engaged in a 4-person team on smelting furnace power control systems research and development
- 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

Undergrad Research Assistant, Engineering Physics   May 2020 – Aug 2020

McMaster University, Hamilton ON

- 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
- Established communication between different devices within the test section to obtain relevant data

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Teaching Assistant, Engineering Design and Graphics   May 2020 – Aug 2020

McMaster University, Hamilton ON
- Assisted 30-50 students in using Autodesk Inventor during 3-hour weekly labs
- Invigilated in-lab tests, graded CAD designs & 3D projection sketches
- Aided students in their roles as project leaders and in technical portfolio development

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 $7500

3D Interior Mapping   (Grade Received: A+)
- Worked in a team of 3 to develop a 3D mapping solution for interior locations using Autodesk Inventor performing various design techniques
- Employed active stereoscopic vision & triangulation using webcams, lasers, & Raspberry Pi to create a device that takes distance data points from a projected pattern and scans 360°

Extracurricular Activities

Director of Programming | Canadian Federation of Engineering Students   2018 - Present
- Organized 3 days of sessions and programming for 150 delegates from across Canada
- Connected and coordinated with 45+ individuals and organizations to develop workshops, sessions and keynote talks on a wide range of topics on Diversity in Engineering

Engineering Physics Ambassador | McMaster University   2018 - 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 | McMaster University   2018-2021
- 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

Skills

Software
- Python
- C/C++
- Java
- Assembler
- Microsoft Excel

- MATLAB
- Maplesoft
- Autodesk Inventor
- Solid Works

Safety
- CPR & First Aid
- Laser Safety
- Class IV Laser Training
- Electrical Safety
- WHMIS