# OBIDAH ALAWNEH

AEROSPACE ENGINEER (EIT)

## DETAILS


**ADDRESS**
Mississauga
Canada

**PHONE**
2892189667

**EMAIL**
obidah.mohammad@gmail.com


## LINKS

www.obidahalawneh.com

LinkedIn- Obidah Alawneh

## SKILLS

Ability to Work in a Team ●●●●●

Microsoft Office ●●●●●

Critical thinking and problem solving ●●●●●

Analytical Thinking ●●●●●

Interpersonal Communication Skills ●●●●●

Catia V5 ●●●●●

ANSYS ●●●●○

SolidWorks ●●●●●

OpenSim ●●●●●

Blender ●●●●○

Matlab ●●●○○

Ls-Dyna ●●●○○

## PROFILE

Aerospace Engineer in Training (EIT), certified by the PEO with 3 years of aerospace engineering experience focused on Cabin and seat design gained from working as an undergraduate research assistant as well as doing my Master of Applied Science degree at Ryerson University for a Bombardier Cabin project. With a history of meeting company and research goals utilizing consistent and organized practices. Skilled in working under pressure and adapting to new situations and challenges to best enhance the organizational brand.

## EMPLOYMENT HISTORY

### System Integration and Testing Engineer, Maple Advanced Robotics Inc.

Richmond Hill, ON

Jan 2022 — Present

- Designed the robotic lab setup using **SOLIDWORKS** to assess different algorithms created by the team.
- Created animations of lab setup and software prototype using **Blender** animation software to showcase to investors and potential clients.
- Developed integration processes and ensured that all technical specifications were provided.
- Coordinated with various department, evaluated cases, and ensured those technical specifications were in accordance with business requirement.
- Developed the mounting bracket of 3D Camera to be added to the current lab setup for future experiments.
- Tested different simulations and path planning algorithms developed by the team, and provided feedback to further improve the designs.
- Developed multiple **MATLAB** codes to automate the process of data preparation for various tests that are needed to be applied on the robotic arm.

### Graduate Research Assistant, Bombardier

Toronto, ON

Aug 2020 — Present

- Acquired more than 100,000 dollars in funding for the cabin project, by presenting reports and presentations to 15 NSERC representatives.
- Authored one review paper, and co-authored two conference papers in different engineering journals, discussing new methods of seat comfort evaluation in an aircraft.
- Proposed new comfort analysis methodology using OpenSim software to analyze internal muscle forces for seat design.
- Running FEA simulations on **ANSYS** and **LS-Dyna** and interpreting results of contact stress and thermal status during human-seat interactions to optimize seat designs and maximize comfort for aircraft passengers.
- Designed the cabin layout of the C-Series aircraft using **CATIA V5**, to assist the team in the reconfigurable cabin interior project, while abiding by the design regulations set by Transport Canada and FAA.

## LANGUAGES

English

Arabic

**Graduate Teaching Assistant, Toronto Metropolitan University** Toronto, ON

Jan 2022 — Apr 2022

*AER 222: Engineering Design and Graphical Communication*

- Mentored a core of 25 first year aerospace engineering students for one semester.
- Taught students basic skills of computer aided design of CATIA V5 software.
- Delivered 12 full lectures and lab sessions to classrooms of 25 students each.
- Developed trust and rapport with students, providing assistance to professor and engaging students in learning activities and positive behaviors to optimize their understanding of lessons.
- Mentored engineering students on technical sketching in compliance with Canadian standards: orthographic views and auxiliary views, sections views, dimension and tolerance, assembly and working drawings.
- Introduced the topics of role of design in engineering, problem analysis, conceptual design and analysis, systems thinking and detailed design.

## EDUCATION

**B.Eng Aerospace Engineering, Toronto Metropolitan University** Toronto, ON

Sep 2016 — Apr 2020

Dean's List 2019-2020

**MASc. Aerospace Engineering, Toronto Metropolitan University** Toronto, ON

Sep 2020 — Aug 2022

GPA: 4.0/4.33

Ryerson Graduate Fellowship Scholarship

## PUBLICATIONS

**Finite Element Methods for Modeling the Pressure Distribution in Human Body–Seat Interactions: A Systematic Review**

By Obidah Alawneh, Xianzhi Zhong, Reza Faieghi, and Fengfeng Xi

Applied Sciences Journal

https://doi.org/10.3390/app12126160

**A 3D Biomechanical Model of Human-Seat Interaction**

By Xianzhi Zhong, Obidah Alawneh, Jason Xi, Reza Faieghi, and Fengfeng Xi

Mechanisms and Machine Science

https://doi.org/10.1007/978-3-030-99826-4_12

**Evaluation of Loadings in Head-CervicalThoracic Region for a Parameterized Aircraft Seat Backrest with Different Headrest Designs**

By Xianzhi, Yuezhi Liu, Obidah Alawneh, Reza Faieghi, and Fengfeng Xi

Comfort Congress 2021 Proceedings

https://publications.ergonomics.org.uk/uploads/03_Xianzhi-Zhong.pdf

## EXTRA-CURRICULAR ACTIVITIES

### Under-Graduate Research Assistant for Bombardier Cabin Interior Project, Ryerson University

Toronto, ON

Sep 2018 — Apr 2020

- Developing, implementing and testing ideas on reconfigurable interior, using the C-Series cabin mockup, with four tech buckets, with the aim of enhancing customer experience while being cost efficient.
- Working in a team of five, supervised by Dr. Fengfeng (Jeff) Xi.
- Collect and refine data using **Excel** and **Access**.
- Using statistical distributions from Excel onto PowerPoint to prepare the presentation for stake holders at NSERC

### Fuselage Design Team Member, Ryerson Aero Design

Toronto, ON

Sep 2017 — Apr 2018

- Collected data, that was refined to be presented to the team to help through the brainstorming process.
- Developed an understanding of different parts of aircrafts especially the design parts of the fuselage.
- Utilized **CATIA** software, to design 3D models.
- Initiated the idea of adding 3D printed parts with foam into the design of the fuselage in order to increase the strength and durability of the body, while meeting the weight requirements.
- Communicated with other departments to ensure our design adhered with overall project strategy and goals.