

Noah Ferrarotto

Mechanical engineering master's student looking to start a career in the world of composites with a dynamic and creative team.

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EDUCATION

- M.Sc., Mechanical Engineering · McGill University** 2020 - 2022
- Thesis: reducing the notorious defects in FDM-type 3D printing via real-time control.
 - Development aerospace-grade polymer brackets using a novel filament developed by the McGill Composites Group.
- B.Eng., Mechanical Engineering · McGill University** 2016 - 2020
- CGPA: 3.71

EMPLOYMENT

- Student Researcher · Hutchinson Aerospace and McGill University** May 2019 - Aug. 2019
- Developed a method for making 3D-printed cores for liquid composite moulding.
 - Manufactured composite test samples using industrial-grade techniques and materials.
 - Presented this method's potential for manufacturing of more complex composite parts to members of faculty and industry.
 - Awarded 1st prize in the aerospace category.
- Manufacturing Engineering Intern · MedXL, Inc.** May 2018 - Aug. 2018
- Implemented practical solutions to maintain and improve production lines under the supervision of the lead manufacturing engineer.
 - Designed robust replacement parts to increase production line longevity and reliability.
 - Created manufacturing drawings and visited suppliers to ensure part quality and on-time delivery.
 - Assisted mechanics in servicing the machinery.

LEADERSHIP AND INVOLVEMENT

- Hydrofoil Team Lead · Rafale ÉTS McGill** Sept. 2019 - Current
- Sparked the first ever design team partnership between McGill and ETS (École de Technologie Supérieure).
 - Helped design a high-performance sailboat using sustainable materials and innovative fabrication techniques.
 - Secured software licenses for model validation with CFD and FEA.
 - Aiming to compete in the SuMoth Challenge (June 2020).
- Volunteer Bike Mechanic · The Flat (McGill Bike Collective)** Jan. 2020 - Mar. 2020
- Taught fellow McGill students to repair flats, index gears and true wheels.
- Member · McGill Cycling Team** Jan. 2018 - Mar. 2020
- Participated in club rides and indoor training sessions.
- Chassis Team Member · McGill Formula Electric** Sept. 2016 - Aug. 2018
- Designed carbon fiber laminates to maximize strength, stiffness and weight savings.
 - Implemented those laminates in the design of the chassis monocoque in collaboration with suspension and powertrain teams.
 - Prepared laminate samples for physical testing and validation of strength calculations.
 - Designed CNC-routed moulds and laser-cut drill jigs for accurate part manufacturing with minimal post-processing.
 - Participated in weekly meetings and design reviews to orient new members and evaluate design progression.

AWARDS

- Undergraduate Research Winner · McGill Faculty of Engineering** 2019
- Awarded best overall poster presentation in the aerospace category.
- Nomination for Excellence in Written Communication · McGill Writing Centre** 2017
- Shortlisted among the 8 best engineering research papers across 259 entries within the Communication in Engineering course.

SKILLS

DESIGN WITH COMPOSITES: Laminate design, CAD, FEA, and ply nesting.

PROCESSING OF COMPOSITES: Characterization, prepreg, infusion, wet layup, autoclave curing, and physical testing (ASTM).

SHOP FLOOR AND SAFETY: 3-Axis CNC milling, 3D printing (FDM and SLA) WHMIS codes, laser cutting, and TIG welding.

SOFTWARE: Abaqus, AutoCAD, SolidWorks, MATLAB/Simulink, Raven, NX, Fusion 360, MasterCAM, Arduino, and Excel VBA.

LANGUAGES: English and French fluency.