

LARA FADEL

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Education

Katholieke Universiteit Leuven

Master of Science in Materials Engineering

September 2021 – present

Leuven, Belgium

American University of Beirut

Bachelor of Engineering in Mechanical Engineering

August 2016 – May 2020

Graduated with High Distinction

Beirut, Lebanon

Work Experience

Services Design Technology

Mechanical Engineer

Nov 2020 – Dec 2020

Beirut, Lebanon

- Design of HVAC systems for multiple projects in the UK and the Middle East under the Mechanical Engineering unit. Weekly updates and meeting presentations were held to update the client of the progress.

The Red Room, MSFEA, AUB

MakerSpace Student Organizer

Sept 2019 – Dec 2019

Beirut, Lebanon

- Set up state of the art equipment (electrical and mechanical), assisted students in their projects. In charge of the 3D printing, inventory, and marketing materials.

Technical University of Berlin

Visiting Engineering Student

May 2019 – Aug 2019

Berlin, Germany

- Researched about sustainability in MakerSpaces, using concepts such as circular economy cradle-to-cradle.
- Designed a fully functioning Mobile MakerSpace using Fusion 360.
- Prepared a paper on sustainable value creation processes in MakerSpaces.
- Featured in the Engineering Newsletter *MechaLeaks*.

Main Projects

American University of Beirut

A First-Responder VTOL Plane

August 2019 – June 2020

Beirut, Lebanon

- Worked on Zephyr, a first-responder Vertical Take-Off and Landing Radio-Controlled (RC) plane that would deliver medical equipment avoiding any ground transport complications. My role was to manufacture the plane using pre-preg carbon fiber. Additionally, I performed an analysis on the aerodynamic behaviour of the plane via a smoke tunnel test in parallel to a CFD analysis on ANSYS.

Katholieke Universiteit Leuven

Homogenizing Composites Structures to Predict Mechanical Performance

September 2021 – January 2022

Leuven, Belgium

- Worked on Abaqus to simulate the behaviour of composites structure under different loading conditions. After obtaining results from Abaqus, I applied homogenization techniques that aid in the prediction of the mechanical properties of the structure.

Research Experience

American University of Beirut

Research assistant in the Mechanical Engineering Department

August 2019 – May 2020

Beirut, Lebanon

- Worked on simulating the mechanical response of PET bottles under service conditions under the supervision of Prof. Ramsey Hamade. My job included performing experiments simulating stacking load during transportation and resulting reactions as the consumer removes the cap, alongside an FE analysis verifying the experimental results. The culmination of this work was presented to the supervising committee.

Technical Skills

Languages: Matlab, C++, Arduino

Design: ANSYS, Abaqus, Solidworks, PTC Creo, Fusion 360, AutoCAD, CES EduPack