

ALI HARIRI

Beirut, Lebanon | +961 71817779 | aah71@mail.aub.edu

EDUCATION

09/2013 to 12/2017	Bachelor of Engineering in Mechanical Engineering American University of Beirut Elective Courses include: Machine Learning, Finite Element Analysis, Computational Fluid Dynamics, Energy Economics and Policy.	Beirut, Lebanon
09/1998-05/2013	French Baccalaureate Lycée Franco-Libanais Verdun	Beirut, Lebanon

EXPERIENCE

06/2018-12/2018	Mechanical Engineering Intern <i>CERN (European Council for Nuclear Research)- Engineering Department- Experimental Area</i> <ul style="list-style-type: none">Designed a mechanical support for the Q74 superconducting magnet on CATIA V5 in order to get a precise alignment within the beam line.Designed an automation mechanism for cable transport in the CHARM experiment in order to decrease human exposure to radiation.Performed structural analysis on beams carrying distributed SIRIUS Power Converter racks and compared the results to the current setup of Power Converters.Took charge of setting up the VAX (Vacuum Area Experimental) parts and performed the required mechanical tests to ensure the feasibility of its placement in the CMS cavern.	Geneva, Switzerland
01/2018 to 05/2018	Research Assistant <i>American University of Beirut- Mechanical Engineering Department</i> <ul style="list-style-type: none">Worked on corrosion inspection of metallic plates through a combination of 3D Scanning and Ultrasound techniques.	Beirut, Lebanon
06/2017 to 07/2017	Intern <i>Establishment of the water of Beirut and Mount-Lebanon</i> <ul style="list-style-type: none">Performed daily maintenance on water pumps in different stations around Beirut.Reported data regarding pump performance in addition to any pump failures and leakages.	Beirut, Lebanon
06/2016 to 08/2016	Summer Intern <i>CERN (European Council for Nuclear Research)-CMS Experiment</i> <ul style="list-style-type: none">Participated in the CERN summer student program where I was part of the CMS group.Performed precise measurements of low currents (pA range) inside the CMS detector using a Keithley 487 picoammeter and the LABVIEW software.Developed a data analysis approach using the C++-based ROOT software.Investigated and analyzed the response of the outer layer of the detector to irradiation.Presented the results to the CMS team during weekly meetings.	Geneva, Switzerland
04/2014 to 05/2016	Research Assistant <i>American University of Beirut- Mechanical Engineering Department</i> <ul style="list-style-type: none">Participated in research experiments with an emphasis on Non-Destructive Testing.Inspected the quality of the welding on aluminum plates using Lamb waves. The experimental setup consisted of a wave generator, an oscilloscope, and an amplifier.Signal processing and data analysis using MATLAB tools.	Beirut, Lebanon

PROJECTS ACCOMPLISHED

- Optimization of the number and volume of fins on a plate to get optimal heat transfer.
- Simulating the flow of Copper particles in multiphase media using OpenFOAM (CFD).
- Finite Element Methods to study the biomechanics of a spine under loading.
- Study and Analysis on the implementation of Rabid Bus Transit in Beirut.
- Automated Carbon Fiber Layup Machine that cuts Carbon Fiber sheets to specific dimensions and displays them on a rotary disk at a user-defined angle.
- Control systems: Controlling the rotation of the Quanser Qube product with an embedded mirror, in order to adjust the horizontal displacement of a reflected laser.

SUMMARY SKILLS

COMPUTER SKILLS: C++, Python, MATLAB, Java, Microsoft Office, OpenFOAM (CFD), AutoCAD, ANSYS, CATIA V5.

LANGUAGES: Full proficiency in English, Arabic and French. In addition, I speak German at B1 level and basic Italian.

COMMUNICATION SKILLS: Professional and public speaking. Participated in numerous speaking contests including the Student Development Competition and within Toastmasters Lebanon.

CERTIFICATES: Goethe B1-Zertifikat, Dean's Honor List for Academic Achievement.