

Fadi Atallah

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Education

MSc Composites, Imperial College London 2021 – Present

Current Average: **TBA**

Relevant Modules: Structural Integrity and Health Monitoring, Nanocomposites and Structural Power.

BEng (Hons) Mechanical Engineering, Cardiff University [view transcript](#) 2018 – 2021

First Class (79%)

Favourite Modules: Materials and Manufacture, Finite Element Method, and Fluid Mechanics.

International Baccalaureate, Modern Montessori School 2016 – 2018

IB Diploma: Mathematics HL, Physics HL, Design Technology HL, and English HL.

Professional Experience

Structural Health Monitoring Department, Cardiff University Jul – Sept 2021

Summer Researcher (CUROP), Supervisor: Dr Abhishek Kundu

- Studied dispersion behaviour on damaged composite waveguides to assess structural failure.
- Investigated the technological implementation of autonomous monitoring of light composite structures.
- Interpreted Mass and Stiffness Matrices into a VTK format in Python, and constructed a transfer matrix.
- Modelled finite section of an infinite waveguide; simulating its behaviour over different fibre layups.

CUBII – Industrial Solutions Jun – Aug 2019

Software/Mechanical Engineering Intern

- Honed experience in Linux Administration by installing, configuring, and maintaining desktops & servers.
- Designed sheet metal components, weldments and applied prototyping skills on SolidWorks.
- Simulated Finite Element Analysis to modify beam designs and prevent structure fracture & fatigue.

Relevant Skills

Technical

- Data Science: NumPy, pandas, seaborn, and matplotlib packages.
- CAE: ANSYS Workbench (Mechanical), ABAQUS (composites modelling & layup scripting).
- CAD: SolidWorks (Design, 3D Sculpture, and Visualize).
- Image Processing: Python (OpenCV & scikit-image), and MATLAB (MVTB toolbox).
- Typesetting with \LaTeX (scientific documentation and slideshow). [Additive Manufacture – AM Dissertation](#)
- Static Web Development: HTML, CSS, and NGINX.
- GNU/Linux (Arch, CentOS and Debian-based), & Shell Scripting. [view details](#)
- Statistical Modelling: Selective Laser Melting (SLM) optimisation of porosity and surface roughness.
- Microscopy: 3D Optical Profilometer surface roughness measurement, and stitching.
- Other technical: UNIX tools (Vim, Awk, Sed), git, C++ (beginner).
- Graphic Design: Adobe Photoshop, After Effects and Premiere Pro (video compositing and editing). [view](#)
- Technical and freehand drawing.

Personal Skills

- Team player and independent leader in Scooter Product Design, and GearBox group project.
- Good communication skills, both orally and in writing, including presentation to audiences.
- Languages: English: Full professional proficiency, Arabic: Mother Tongue.

Public Speaking and Volunteer Experience [view examples](#)

SolidWorks, Dassault Systèmes [view event details](#) Aug 2021

Presented "Increase Your Computer's Efficiency with Linux" in a conference with 1200 attendees (SLUGME6 – SolidWorks Largest User Group Meeting Ever)

- Discussed the importance of familiarising with Linux, and UNIX Tools to improve user's computer efficiency.

Magic Wheelchair [view details](#) Jun – Aug 2021

SolidWorks Champions design build in the UK

- Designed the structure on a Wheelchair costume with fellow Champions for a child interested in LEGO Ninjago.

Mentor Consultant [see credential](#) Sept 2020 – Jun 2021

Cardiff University

- Lead student mentors with topics, and collaborated with University staff to summarise their progress.

Student Mentor (Advanced) [see credential](#) Sept 2019 – Jun 2020

- Lectured 18 first-year Mechanical Eng. students in writing CVs & Sci-Lab Reports.

Achievements

- **SolidWorks Champion** (top 4 % certification member), Dassault Systèmes. Jun 2021
- Achieved 96% overall average in (**Engineering Analysis and Computing 2**) Double Module. Jul 2020
- Achieved 100% in second-year Presentation (**Design, Make and Test Project**). Mar 2020
- Awarded a prize from the Worshipful Company of Tin Plate Workers and Cardiff University for obtaining the highest grade average amongst all 220 Engineering students in (**Materials & Manufacture Double Module [20 Credits] – 91%**). Oct 2019
- Innovated a design of a new physical model that prolongs fruits and vegetables freshness for an extended time without electricity using vacuum and oxygen absorbers. Jan 2018

Certifications

Certified SolidWorks Professional Advanced (CSWPA) – **Weldments**, Dassault Systèmes Sept 2020

Certified SolidWorks Professional Advanced (CSWPA) – **Drawing Tools**, Dassault Systèmes Aug 2020

Certified SolidWorks Professional Advanced (CSWPA) – **Sheet Metal**, Dassault Systèmes July 2020

Certified SolidWorks Professional (CSWP CORE) – **Mechanical Design**, Dassault Systèmes July 2020

Leadership Development Experience, AIESEC July 2019

Certified **Motion Graphics Specialist** – Photoshop & After Effects (112 Hours), Pearson UK Feb 2016

International Computer Drivers License (**ICDL**), ECDL Foundation May 2015

Activities

Linux enthusiast, regular gym member, and pool playing.