# William Lewis Busby

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## Education

*University of Sheffield* Sept 2017 - June 2021
MEng Aerospace Engineering with Year in North America (Achieved 1st Class.)

- Full time 4-year course, with 3rd year studying abroad at the University of Texas at Austin.
- Final Year Project: Numerical Simulations of Flow Through 3-Dimensional Multi-Scale Porous Obstacles.
- Other relevant coursework: Computational Fluid Dynamics, Aerospace Fluid Engineering, Aerospace Matter Flow and Energy with Professor Stephen Beck, Aerostructures, and Advanced Dynamics with Professor Keith Worden.

*Imberhorne School*
A levels Sept 2015 - July 2017

- A* in Maths, Further Maths and EPQ, A in Physics, B in Chemistry (AS level).

GCSEs Sept 2013 - July 2015

- 10 GCSEs (A* - C) including English (A*, A), Maths (A*) and Science (A).

## Technical skills and projects

Aircraft Design project.

- Tasked with designing a UAV used to survey an area and deploy payloads as required.
    - Team lead for air vehicle configuration, identified issues with certain kits selected.
    - Responsible for data analysis and abnormality detection.
    - Conducted finite element analysis on wings for maximum load.

Design of Structures, Machines and Systems project.

- Worked in a team of 5 to design a light-weight wooden structural support bridge capable of withstanding 18kg.
- Participated in team-based structural design to maximize safety and weighted decision-making.
- Finite element analysis was completed for each model using computational methods.

Engineering You're Hired (EYH).

- Research for aircraft with lower carbon emissions for future development.
- Specifically researched electric aircraft for commercial purposes and development of battery technology.

Final Year Project.

- Numerical Simulations of Flow Through 3-Dimensional Multi-Scale Porous Obstacles.

- Varying levels of Sierpinski carpet with corresponding values of succolarity, lacunarity and fractal dimension.
- Studying of the wake properties using OpenFOAM icoFoam solver and Paraview.

Project Volaticus.

- Competed in the Institute of Mechanical Engineers UAS project to design a UAV.
- Lead the fuselage design and configuration analysis within Aerostructures team.

Year Abroad in North America.

- Studied at the University of Texas at Austin for 3rd full academic year.
- Achieved 3.96 GPA (equivalent to 92.5%).
- Study abroad representative whilst studying abroad in Austin.

IT Skills

- Proficient using Matlab, Microsoft Office, SolidWorks, and Fusion360.
- Experienced with ANSYS Fluent and OpenFOAM.
- Competent with LabVIEW, control systems toolbox for Matlab, and Python.
- Currently learning SQL for further data analysis skills.

Specialized Skills

- Have experience with lathes, band saws, sanders, hand and bench drills, 3D printers, laser cutters and Charpy tests.

## Extracurricular Activities and Interests

- Member of the Institute of Mechanical Engineers and the Royal Aeronautical Society.
- Student representative for Aerospace Engineering at the University of Sheffield.
- Member of the Aerospace student organisation at the University of Sheffield.
- Coached U10-12s hockey for 2 years at East Grinstead hockey club, helping to improve leadership and planning.
- Tutored GCSE Maths for 1 year.
- Cared for Grandparents during summers of 2018, 2019, 2020, and 2021.

## Previous Work

- Farm worker at Brambletye Fruit Farm, West Sussex – 09/2020
- Worker at Stones Butchers, West Sussex – 06/2021-08/2021

**References available on request**