

Paul Cohen – Curriculum Vitae

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Education

October 2013 - Present Emmanuel College, University of Cambridge, Mechanical Engineering M.Eng.

Years 1 and 2 Courses:

Mechanics Structures Electronics
Linear Systems E.M. Materials
Thermodynamics Mathematics

Design Projects:

➤ Structural project ➤ Safety Product Design
➤ Integrated Design Project to design, build and test an autonomous mobile robot vehicle

Masters Project:

3D bioprinting at the nanoscale, for microfluidic applications

Year 1 Grade:

Class I

Year 2 Grade

Class I

September 2015 – May 2016

Massachusetts Institute of Technology, Mechanical Engineering (Cambridge-MIT Exchange)

Fall Semester:

2.009 – The Product Engineering Process
6.01 – Introduction to EECS
2.092 – Introduction to Finite Element Analysis
English 60 – Migrations: Fictions of America (Harvard course)

Spring semester:

2.70 – Precision Product Design
2.017 – Design of Electromechanical Robotic Systems
2.008 – Design and Manufacturing II
2.821 – Selection and Processing of Structural Materials

G.P.A.:

4.9 out of 5.0

A Levels:

Maths (A*), Further Maths (A*), Physics (A*), Chemistry (A*)

GCSES:

12 A*s

Experience

Intern, Frazer-Nash (Midhurst)

12 weeks 4th July – 23rd September 2016

Frazer-Nash is a precision engineering and design company that specialises in the food industry. Worked in both the drawing office and on the factory floor. Responsibilities included:

- Developing the concept design for a novel hollow 3D printed horseshoe. Modelling in Autodesk Inventor and Magics; setting up and running builds on Renishaw AM250 SLM machine; working closely with stakeholders to inform design.
- Turning parts on a manual lathe from engineering drawings. Included various materials (stainless and alloy steels, aluminium bronze, aluminium), to tolerances as low as 0.013mm.
- Detailing drawings of parts and assemblies, to be machined in house.
- Writing case studies on metal additive manufacturing capabilities; involved support structure experimentation.

Intern, Global Maritime Consultancy Ltd. London

8 weeks 4th August – 26th September 2014

A marine, offshore and engineering consultancy. Based in the Design department, working with Naval Architects, Civil Engineers and Draughtspersons. Projects undertook included:

- Using Autodesk Inventor to create parametric models to be used in concept design visualisations.
- Investigating the stress analysis capabilities of Inventor compared with GeniE, by recreating a crane pedestal in each programme and applying systematic tests.
- Verifying and modifying calculation tools for vessel structure design.
- Applying quality assurance controls to ensure compliance with American Bureau of Shipping classifications.

Student, Smallpeice Trust Computing and Microelectronics course

July 2012

The course took place at Southampton University, where I spent 3 days working in a team of 5 to design, build and programme an autonomous robot to take part in a competition with other teams' robots. My responsibilities were:

- Designing the robot with the rest of the team, and fabricating out of plywood, Meccano and aluminium.
- Calibrating the motors and assisting with writing the computer program in Python.

Volunteer, Union Cycle Works

September 2011 – August 2012

I was a volunteer mechanic at a cooperative bicycle workshop in Deptford, which ran every Saturday. The workshop raises money to help train disadvantaged people as mechanics, giving them personal, practical and social skills. I was involved in renovating parts and assembling them into full bicycles, to be sold as bespoke builds to raise money for the co-op.

Work Experience Student, Brompton Bicycles Ltd

5th-16th July 2010

Brompton Bicycles manufacture distinctive folding bicycles. I worked in marketing, sales, human resources, design and the workshop. I was responsible for designing certificates for company training, as well as bicycle repairs in the workshop.

Skills and

Awards

Languages

French (A2/B1)

C++

Python

Matlab

Excel VBA

3D Modelling

Solidworks

Autodesk Inventor

MasterCAM

GeniE

Creo

ADINA

Magics

Awards

Ash Senior Scholarship

Wallace prize

Rowley Mainhood prize

College prize (Emmanuel)

Competencies

Mechanical Design

Mathematical Analysis

Project management

3D Modelling

Mill & Lathe machining

Other Achievements

Grade 7 piano

Grade 5 music theory

Interests

I am a keen cyclist, rock climber and bike polo player. I enjoy listening to jazz, tinkering with bicycles, reading, spending time in museums, and exploring new cities.

References

Available upon request