

Paul Cohen — Mechanical Design Engineer

56 Jacobs Court – Bristol, BS1 5US – UK

+44 773 310 9345 • paulcohen95@gmail.com • pauljcohen.com

Experience

Kinneir Dufort

Bristol, UK

Mechanical Engineer, Sustainability Lab co-lead

Jan 2020–present

Kinneir Dufort (KD) is a user-centred design and product development consultancy. I work on a variety of medical, consumer and industrial projects in multi-disciplinary project teams, while also founding and heading up the internal Sustainability Lab initiative to develop sustainable and circular design practices and processes throughout the company. Responsibilities and achievements include:

- Overall ownership and management of the mechanical design for a point-of-care medical diagnostic device. Included precision motion design and analysis, close collaboration with electronics and software, design of experiments for device verification, and prototype build management. This was one of the largest projects to date at KD.
- Design and development of injection moulded parts for multiple projects in consumer and medical sectors.
- Contributing to proposals, costing projects and managing junior engineers.
- Joined as a junior engineer, before quickly progressing to a mid-level in recognition of my achievements and competence.

KD Sustainability Lab: An employee-led initiative to incorporate sustainable and circular design practices into more projects, as well as bring in more sustainability-led projects. Activities include:

- Developing the manifesto, strategy and many of the resources alongside the other lead for the Lab.
- Delivering workshops (internally and externally) to educate team members and clients on topics such as Right to Repair, sustainability in healthcare, lifecycle assessments, while also authoring sales material and opinion pieces for marketing purposes.
- Consulting internally on sustainability aspects of projects in all sectors.
- Completing formal training on lifecycle assessments and circular design.

Alloy Product Development

San Francisco CA, USA

Mechanical Engineer

Nov 2017–Nov 2018

Alloy Product Development is a product design consultancy based in San Francisco, California. I worked with a range of clients, from mature startups to Fortune 50 companies. I specialised in mechanism design and tightly packaged consumer electronics, working at all stages of the product development process. Responsibilities and achievements included:

- Ownership of a complex mechanical subsystem for 9 months, designed to withstand high stresses (250kg load, 12 year outdoor lifetime, high-voltage electronics). Provided onsite support at the client as part of a 10-person team from Alloy; liaised with vendors in China, managing quality control and tooling modifications; pushed design changes for DFM and DFA purposes; designed test plans and rigs to meet regulatory requirements; managed priorities and expectations with the client in weekly meetings.
- Prototyping new designs and test rigs in metal, plastics, and wood using hand-tools, CNC machines and additive manufacturing processes.
- Designing and building custom test rigs to validate client engineering requirements; writing scripts in Python for automatic data analysis and presentation.
- Extensive use of top-down 'master modeling' practices in Creo 3.0 CAD software; designed and ran static and modal Finite Element Analysis models in ANSYS.

Frazer-Nash Midhurst**Petersfield, UK***Mechanical Engineering Intern**Jul–Sep 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 lightweight 3D-printed racing horseshoe. Modeling 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 engineering drawings of parts and assemblies to be machined in house.

Voluntary

Bristol Bike Project**Bristol, UK***Volunteer mechanic**Sep 2021–present*

Repairing and restoring donated bicycles for asylum seekers and other people in need of low-cost transport.

Samos Volunteers**Samos, Greece***Volunteer**3-30 Sep 2019*

Samos Volunteers provides psychosocial support for asylum seekers who are trapped in dangerous conditions in the refugee camp on Samos. I helped them deliver their services—teaching lessons in their adult learning centre, washing laundry to improve basic hygiene, and assisting the smooth running of the community centre.

Education

Emmanuel College, University of Cambridge**Cambridge, UK***M.Eng. Mechanical Engineering, Distinction**2013–2017*

Covered a general engineering syllabus for the first two years, before specialising in mechanical design in the final year. Achieved 1st class grades in all years.

Massachusetts Institute of Technology**Cambridge MA, USA***Cambridge-MIT Exchange, GPA 4.9/5.0**2015–2016*

Specialised in mechanical design and manufacturing, including precision machine design, finite element analysis, electromechanical system design, and design for manufacturing, as well as an English literature course at Harvard.

Haberdashers' Aske's Hatcham College**New Cross, London, UK***A-levels: Maths, Further Maths, Physics, Chemistry, four A*s**2011–2013***Skills and Awards**

Languages

- French (B1)
- C++
- Python
- Matlab
- Excel VBA

3D Modeling

- Solidworks
- Inventor
- Creo
- ANSYS
- Abaqus

Competencies

- Mechanical design
- Circular design
- CAD modeling
- Injection molding
- Mill & lathe machining

Additional education

- UCL Lifecycle Assessment course: 'From Theory to Application' (4 days)
- Ellen MacArthur 'From Linear to Circular' 2020 programme participant

Interests

I am a keen cyclist, rock climber and bike polo player. I enjoy tinkering with bicycles, reading, spending time in museums, and exploring the great outdoors.

References available upon request.