PAUL BOOTH - Director
2023 Curriculum Vitae

Turtlestack Automation Ltd
The Firs
Kirk Langley
Derbyshire
DE6 4LW

Turtlestack Automation Limited
Director (End 2020 – present)

I created a company and established myself as a Siemens software partner. The company delivers within the Siemens NX environment, delivering contract packages of work and developing a set of NXOpen customisations and automation tools for direct sale – see www.turtlestack.net

Rolls-Royce (Civil Aerospace)
Technology Lead - Compressors Digital Design (2011 - 2020)

Supported the development of a technology infrastructure for Siemens NX process automation within Rolls-Royce and then led a number of teams deploying that technology into the business. Worked with highly multi-disciplinary teams integrating many considerations and perspectives into working systems.

- Created automation infrastructure for Model Based Definition in a company wide programme acting as Product Owner with Indian development team. Developed automated MBD definitions containing geometry context specific heuristics saving man months of definition time.
- Developed a system to automate the definition and analysis of the next generation composite fan blade system. Successfully compressed the definition time for any new design by ~6 man months.
- Geometry lead (and subsequently team lead) for a system for definition and analysis of Compressor components. The system has delivered a hundred fold compression in the engineering definition time for compressor components and enabled new product understanding through DOE and other optimisation possibilities.
- Other projects including Front Bearing Housing geometry, automated geometric cavity identification.

Birmingham City University
Senior Technology Transfer Consultant (2004 – 2011)

An extremely varied role delivering Engineering consultancy, systems, design and product development across many technical industries throughout the West Midlands region from concept through to production. I worked under Professor Craig Chapman developed my interest in Knowledge Based Engineering.

- Crashworthiness analysis of Morgan chassis designs. I was solely responsible for developing concepts, modelling and then assessing them through LS-Dyna analysis. The work with Morgan represents the first analysis led design iteration in the company's history. Included a successful first time crash test of the Morgan Aero Super Sports.
- Technical lead, graduate supervision for a number of programs including Knowledge Transfer Partnership schemes for Morgan, STS Rail, Reynolds Technology and Driftworks. PhD supervision to a maxillofacial surgeon engaged in the development of biomechanical models of the human mandible and skull.
- Project management, project scoping and requirements definition and delivery working with SME Directors and employees within a number of West Midlands companies.

Atkins Global
Consulting Engineer (1999 – 2003)

- Design of linear friction weld tooling for Manufacturing Technologies division of Rolls-Royce. Following successful commissioning and testing of our design a broad range of follow on work was awarded. I became the project manager and technical lead for a further stage of work with Rolls Royce Aerospace.
- Impact and seismic analysis of Vanguard class submarine to substantiate safety case assessments during dry dock refuelling.

- Following an accident at the Chapel Cross nuclear power station I was responsible for emergency analyses in order to determine the worst case extent of impact damage to plant systems. This work fed directly into the recovery work performed.

SKILLSETS

- Business
  - Solid presentation and communication skills practiced from shop floor to board level.
  - Requirements capture / elucidation
  - Team management and development
  - System design and architecting

- Programming
  - C# Good to Expert (trained >30 Rolls-Royce engineers to code)
  - Python – Intermediate and improving (current working language)
  - Have also used LISP (Adaptive Modelling Language KBE), JavaScript, Java, Visual Basic and Actionscript
  - Use of TDD, GIT and Azure DevOps
  - iSight automation and integration toolset
  - Some personal web dev experience e.g. Bootstrap websites, running my own server

- CAD/CAE
  - Siemens NX modelling, analysis and NXOpen coding
  - Catia V5 (a while ago now)
  - LS-Dyna, Abaqus and Ansys

- Other
  - MSOffice suite
  - Photoshop, Inkscape, GIMP, yEd, QGis

QUALIFICATIONS / TRAINING / AWARDS

MEng (Hons) Aeronautical Engineering 2:1 , University of Bristol (1998)
Short listed finalist - Science, Engineering and Technology Student of the Year Awards 1998
Bristol International UAV Conference Prize - Best final year project
'A' Level John Leggott College (1992 - 94)   Physics (A), Technology (A)
                                                Mathematics (B), General Studies (B)

FUN STUFF

I am happily married with three children so have little time left for :-
Running a small speedboat (Zapcat racing class) despite living miles from the sea.
I also enjoy reading, gardening and podcasts.
I play the piano and guitar with inexplicably discordant results?
Building engineering follies and getting involved in stuff including giant parabolic mirror, 1km shot grapefruit cannon, flying drones over volcanoes.