Curriculum Vitae

Simon Kirby

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Date of Birth: 29/03/1985

Education

2003 – 2007 **University of Manchester**
MEng (Hons) Aerospace Engineering: 2.1

Advanced Aerodynamics (4th year)	70%
High speed Aerodynamics (4th year)	71%
Viscous fluids (3rd year)	65%
Heat transfer (3rd year)	65%
Vibrations (4th year)	65%
Structures (3rd year)	67%

Final year dissertation - FEA Analysis of the Crash Characteristics of Composite Car Chassis 69%

1996 – 2003 **Richmond School, Richmond, North Yorkshire**

A level: Mathematics (B), Physics (B), Geography (B), Design Technology (B)

Current Employment

Nov 2013 - Present **Caterham F1 Team, Leafield, Oxfordshire** - CFD Engineer

Over the past year I have helped to re-develop the Steady State CFD method used for aerodynamic development and helped to produced a significant improvement in CFD-WT correlation and process throughput. My work has focused predominantly on CFD-WT correlation and CFD method development. I demonstrated the ability to identify the strengths and limitations in both F1 WT experiments and RANS CFD modelling to help deliver realisable simulated aero development. Furthermore I recently implemented a Design of Experiment (DOE) method which I used deliver a significant improvement in simulated Rearwing performance.

Software tools used: StarCCM+, Java, Python, Paraview, CATIA V5

Previous Employment

April 2011 - Nov 2013 **Defence Science and Technology Laboratory (Dstl), Portsdown West, Portsmouth** - *Aerodynamicist*

Dstl is the UK MODs science and technology organisation, operating across 3 core sites and employing several thousand engineers and scientists. I was part of the Aerospace Sciences team in the Air and Weapons Systems Department. My primary role was to develop and deliver a validated time-accurate CFD, overset mesh approach to model high speed, unsteady flow around spinning bodies. Furthermore I applied a CFD approach to investigate afterbody-exhaust interaction and analyse a low-speed delta-wing design to contribute to the UK's knowledge in Unmanned Air System aerodynamic design.

Software tools used: Cobalt CFD, ANSA, OpenFoam, Fluent, CATIA V5, ICEM CFD, Matlab

May 2009 - April 2011 **Defence Science and Technology Laboratory (Dstl), Portsdown West, Portsmouth** - *Air Platform Signatures Analyst*

I conducted Steady State and Unsteady CFD analysis for internal, wall-bounded and high speed exhaust flows of aircraft and weapons. I developed CFD modelling best practises focussing on validation and sensitivity analysis. Furthermore I was responsible for providing IR signature assessments using exhaust flow-field predictions as input.

Software tools used: Ansys Fluent, ICEM CFD, ANSA, Matlab, Tecplot360

Jan 2006 - Sep 2007 **Penso Engineering, Warwickshire** - *Finite Element Analysis Engineer*

Six month placement with a product development consultancy specialising in CAD, CAE and FEA. I created complex Finite Element models for linear and non-linear crash simulations.

Software tools used: NASTRAN, CATIA V5, ANSA, Meta-Post

Achievements and Awards

- Certified MongoDB Developer
- Authored and presented a paper at the RAeS, Missile Systems and Technology conference, titled 'Time accurate CFD modelling of guided weapons with rolling airframes and moving control surfaces'
- Awarded a Dstl 'Thank You' for outstanding contributions to weapon aerodynamics
- Awarded flight analysis Diploma from Cranfield University

Personal Skills

Teamwork I am a true believer that the team comes first. I enjoy learning from others, will always offer my help and can organise and motivate those around me

Initiative I face challenges head-on. I learn quickly and am always prepared to offer an opinion

Responsibility I will always try my best and will never hide mistakes

Creativity I like to be different and will often attempt to find a solution where others won't

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Additional Skills

- Proficient in the use of Unix desktop and HPC environments
- Experience using Javascript, HTML5
- City & Guilds qualification for an Intermediate Amateur Radio licence

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Interests and Activities

Sport Regularly mountain bike and kitesurf in the UK and abroad. I am a keen skier and ski-tourer. I play several other sports such as squash and hockey.

References available upon request.