

# PERSONAL BEST



Research Councils UK

## CAREERS IN RESEARCH

The researchers  
in their own words

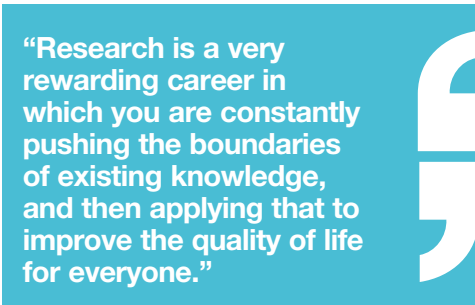
## ENGINEERING

**Steph Forrester** has had three careers – chemical engineer, sports technology lecturer and professional athlete. Following her doctorate, Steph trained as a world-class Olympic triathlete for six years, before returning to research – this time combining her academic and athletic backgrounds to become a sports technologist.

I went to school in Aberdeen and did my first degree at the University of Edinburgh, studying for a BEng in Chemical Engineering. From Edinburgh, I moved south to the University of Cambridge where I studied for my PhD – also in Chemical Engineering – and spent two years as a researcher in Sydney, Australia, before returning to the UK. At this point my career took a slight diversion and I became a professional triathlete. I spent six years as a full-time triathlete which included racing at the 2000 Olympics, attaining a top 10 world ranking, winning various national titles and the World Duathlon Championships. On retiring from triathlon I returned to study at Loughborough University and gained an MSc in Sports Biomechanics, and began a new career path that combined my passion for research and sport. I spent two years as a researcher and teacher in the Sports Biomechanics Research Group, before moving across campus to my current position of senior lecturer in the Sports Technology Research Group.

My research aims to support the development of better sports equipment for the user. 'Better' here can mean helping an athlete achieve their personal best, providing greater comfort or allowing them to perform with greater safety and minimised injury risk. In practice most projects include a combination of these – an example being my current research on sports bras development, allowing women to exercise without breast or bra discomfort, and may also improve performance and reduce risk of injury. So my research activities are centred on understanding how athletes interact with sports equipment, and then applying this information to support equipment design. I am particularly interested in artificial turf surfaces, athletic footwear, sports bras and golf.

I enjoyed maths and physics at school and my undergraduate experience was equally as satisfying. I decided to go on to study for a PhD, knowing my long-term career would be in research. I was however, starting to have doubts about a career in chemical engineering. Sport had always been a major part of my life, and the decision to become a professional triathlete and compete at the Olympic Games was a 'no-brainer' for me. I already had good undergraduate and PhD degrees, which I knew would support me in returning to research, following my career in triathlon. On retirement from triathlon, I was keen to combine my passions for sport and research, and my current career does this perfectly. I always wanted a job that didn't feel like a job, and I have certainly achieved that!



**“Research is a very rewarding career in which you are constantly pushing the boundaries of existing knowledge, and then applying that to improve the quality of life for everyone.”**

I hope to continue building and growing what I am doing, ideally towards Reader and ultimately Professor. To reach professor you need to bring in substantial amounts of research funding and to be world renowned in your chosen field. Not everyone reaches that level and many simply rise to the level that best matches their ambitions. As a former athlete, I have always focused on the 'process goals' rather than the 'outcome goals'. Therefore my focus is on working hard and honestly, constantly challenging myself, and doing the best job I can. As long as I do this smartly, then I will be content that my career will look after itself.



**Name:** Dr Steph Forrester

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**Age range:** 41-50

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**Research institution:**

Sports Technology Research Group, Wolfson School of Mechanical and Manufacturing Engineering, Loughborough University

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**Research career length:**

7 years

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**Research Council:** Engineering and Physical Sciences Research Council (EPSRC)

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**Location:** Loughborough, England

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**Salary:** £40-49k

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**Brief summary of research:**

The biomechanics of how athletes interact with sports equipment

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**School qualifications:**

Scottish Highers in Mathematics, English, Physics, Chemistry, Geography and Engineering

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**Qualifications post-school:**

BEng in Chemical Engineering, University of Edinburgh

PhD in Chemical Engineering, University of Cambridge

MSc in Sports Biomechanics, Loughborough University

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**Career path:**

Researcher in Chemical Engineering in Sydney, Australia

Chemical Engineer for AstraZeneca

Professional triathlete

Researcher and Teacher in the Sports Biomechanics Research Group, Loughborough University

Lecturer in the Sports Technology Research Group, Loughborough University

Senior Lecturer in the Sports Technology Research Group, Loughborough University

This case study is part of a wider resource of Careers in Research case studies available on the Research Councils UK website, covering a range of disciplines including history, maths, arts and humanities, engineering, social science, physics, chemistry, biology, environment and computer science.

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