

Consulting with industry



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What is consulting with industry?

Consulting with industry involves working with partners to utilise their knowledge of industrial practice as part of research. This can often provide a way of testing research outputs in real-life situations.

How I use this method of engagement in my research

Consulting with professional engineers forms a large part of my research process. When I'm trying to validate my research I want to test it on a real-life project, and with professionals working in practice, because ultimately the aim is for them to use the software tools that my research produces.

I get industry professionals involved in steering committees for my research projects. Their role is to give project oversight from their experience of engineering in practice. They tell me if I'm going down a dead end, or if I'm looking into a problem that has already been solved. They also help by actually using the resources I've produced and giving me feedback on whether they worked or not.

For example, a few years ago I supported a project in Denmark. The team came to me and asked if they could include my research as part of a competition bid for a new building. We used my software to generate a solution for a building that would be optimised for its solar gain, so we could get more free energy from the sun because of the shape of the building. The resulting design won the competition and then it was built for real; now it's open to the public and you can go and visit!

My research

My research builds on my many years as a practicing engineer, investigating how computers can be used more effectively in the design of the built environment.



Other types of engagement I'm interested in

I work with older school children – those doing GCSEs and A Levels – to show them that engineering is a potential degree and rewarding career. I also helped set up the *Young Researchers' Programme* with Bath Royal Literary and Scientific Institution (BRLSI). This is an eight-month programme through which young teenagers complete a meaningful research project, using real-life scientific research processes. BRLSI now run this every year, with doctoral students involved as research supervisors.

I also work with a national not-for-profit organisation called MathsInspiration.com, who put on large-scale events aimed at school children. Through this I've shared the stage with high-profile speakers (including Marcus du Sautoy and Simon Singh) in high-profile venues (for example, Theatre Royal Bath, Bristol Hippodrome and London's West End), communicating my research to up to a thousand young people at a time.

How public engagement benefits me

Public engagement helps me with funding applications. I use letters of support from my industrial partners to show the relevance of my research in practice. My industrial partners also help get my research results out there and used by others in industry, generating impact from my work.

Presenting to a thousand school children at a time has undoubtedly given a huge boost to my confidence as a public speaker. I've also developed my ability to explain complex concepts to non-specialists, and this has had a positive impact on my teaching.



www.bath.ac.uk/public-engagement