

Development and Alumni Relations



Dr Rupert Young (COGS 1991)

What was your first job?

Deckchair attendant on the seafront at Brighton. It was a very cool job to have as a 17 year old.

Who's influenced your life most (and why)?

During my PhD (Surrey University) I came across William T. Powers' theory of how humans and all living systems operate, known as Perceptual Control Theory (PCT). His insight, that we control perceptions not actions, will revolutionise how we think about behavioural systems and how we attempt to recreate them in robots and artificial systems. The theory is a very elegant and parsimonious exposition of life with respect to behaviour and is akin to natural selection within biology. It has influenced the choices I have made about the direction of research and career path I have taken ever since.

What's the best piece of advice you've had?

Life is what you make it.

What are you passionate about?

Many things: human rights, cycling and Salsa dancing. But particularly I am passionate about understanding how the human mind works. I think if we understand ourselves properly, we can resolve many of the issues faced by humanity such as social inequities, criminality and ideological radicalisation.

Who's your hero/heroine?

The human rights activist Maryam Namazie is someone I admire. She has shown great courage to stand up for reason and rationality against religious fundamentalists and ideologues despite great abuse and intimidation.

What's your favourite pastime/relaxation activity?

I love cycling. I have a cross-cycle and have been on some long trips: around Cuba; up to Scotland and back; down the west coast of India from Mumbai to Kanyakumari. For the latter, the traffic was a bit hairy at times but I only got knocked down once in 1,100 miles, fortunately just by a Tuk-Tuk.

One dreary January I had a paper to write, so decided to go somewhere more interesting to do it – that was the purpose of the India trip. As I cycled down the coast I'd stop off at various places for a few days, write on scraps of paper and then type up the notes when I came across an Internet café. The [paper](http://www.mitpressjournals.org/doi/pdf/10.1162/ARTL_a_00229) (http://www.mitpressjournals.org/doi/pdf/10.1162/ARTL_a_00229) has now been published in *Artificial Life*.

What can't you live without?

My bicycle!



About Rupert

The founder of Perceptual Robots, Dr Rupert Young, is an independent researcher and technologist. He received his degree in Computing with Artificial Intelligence from the School of Cognitive and Computing Sciences (COGS) at Sussex and his PhD in Robotics Vision from the University of Surrey. He is passionate about understanding the world around us and in particular the nature of humans and other living systems. His research interests lie in building real-world robotic models of perception and behaviour as a means to investigate and understand purposive living systems, and in order to produce useful artificially intelligent systems.

Follow Perceptual Robots on [Twitter](#) and [YouTube](#) and and visit their [Website](#) and [Patreon](#) crowdfunding page

Tell us about a turning point in your life

I used to be a skydiver and one day had an accident where my first parachute failed to open and then the reserve parachute broke apart as it opened. As I was falling out of the sky I seriously expected to die, though remained strangely calm. Fortunately, the parachute wasn't completely broken and did slow me down a bit: I landed in a soft, muddy field and was very lucky to hobble away with just a sprained ankle. Encounters with one's mortality can give you a very different perspective on life – to not take things too seriously and make you realise that life is very short and if you want to make the most of it you need to take control of what happens and not waste a moment!

What do you consider to be your biggest achievement?

Studying for and completing my PhD. It was a few years of anguish and uncertainty of not knowing what the goal was or how to get there. It was tough and long as I had to write the thesis while I had a full-time job in IT, but things came together in the end.

What attracted you to studying at Sussex?

At the time, most courses were Computer Science with a bit of Artificial Intelligence (AI) thrown in. The Sussex course was very different and comprised equal amounts of AI computing, cognitive psychology and philosophy of the mind. This allowed the time and space for deep thinking about the nature of behaviour and intelligence, giving a much more comprehensive and in-depth perspective on what needed to be done to replicate intelligence in artificial systems.

Did you have a favourite spot on campus?

I did like East Slope bar as I worked there for the three years I was at Sussex. It was a fun and friendly environment in which to work.



East Slope Bar circa 1985 (Image: Alison Neads nee Churchill (MAPS 1985-89))

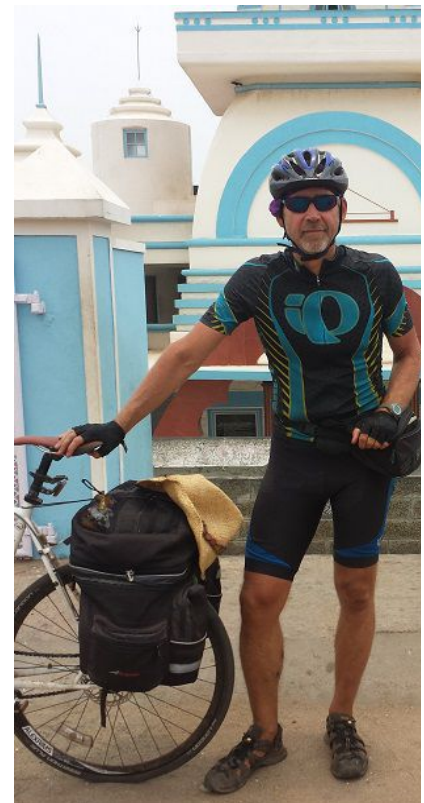
What part of the Sussex experience has helped you the most?

It was the philosophy part of the course from which one acquired a frame of mind to analyse and question the fundamental nature of being and not blindly accept that conventional wisdom was necessarily correct and valid. It was this framework of critical thinking and inquiry that led me to investigate beyond the accepted paradigms and find PCT, a radically different way of thinking about behavioural aspects of living systems.

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Thought provoking.

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What sparked your decision to set up your business, Perceptual Robots?

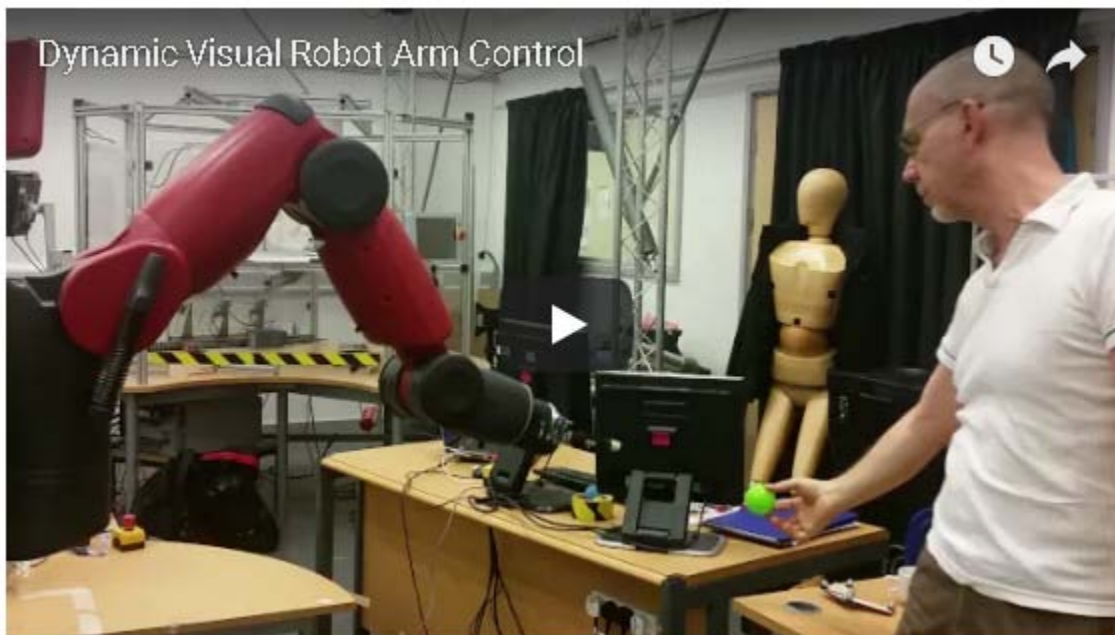
I had thought that the particular theory in which I was interested was resigned to obscurity, and had only looked at creating robots based upon it as a hobby. However, a few years ago I met up with Dr Warren Mansell (<http://www.pctweb.org/> (<http://www.pctweb.org/>)) who I discovered was doing serious research and teaching in PCT and the theory was gaining recognition. This spurred me on to leave my job, set up Perceptual Robots and dedicate all my time to developing the technology for robotics and to demonstrate a radical approach to intelligent systems that brings in to question the conventional way of thinking.

What part of your research into robotics are you currently most excited about?

The basic methodology of Robotics and AI has not changed for all of its 70 year history and is based upon the concepts of stimulus-response, or control of output. My research shows that this assumption is misconceived, resulting in unnecessarily complex systems and my methodology demonstrates a much simpler, flexible and biologically realistic way of developing robots. The untapped potential of this approach is huge, so it is very exciting to develop such systems and to disseminate a vision that is going to have a profound effect, not only on robotics but also on how we understand ourselves.

How do you envisage the role of robotics in everyday life 50 years from now?

I think robotics will fill the role of technological assistants to help humans in many walks of life. It will take many more years, maybe 500, before robots get anywhere near the sophistication and level of intelligence of humans. However, it will depend to a large extent on the methodology used.



**For video, click
triangle or Here.**

Are you concerned that technology might move too quickly for society to fully understand the implications of where advanced robotics might take us?

On the whole, technology has been beneficial for society but it does result in a more dynamic work environment where some jobs become obsolete and the workforce would need to be more flexible to change skills when required. To work effectively, this must be supported by governments to provide lifelong education and re-training support so that people and communities are not left behind.

What is the most important lesson life has taught you so far?

I think it is crucial to question everything in life, but most importantly to question one's self, the beliefs, thoughts and assumptions that one has. Doing so can bring the realisation that most things in life are subjective and, therefore, are not set in stone. This means that it can be fairly easy to change how you perceive the world and, so, the patterns of behaviour that arise.

What was your worst job? Before I went to Sussex I was a land surveyor and worked on a site building a Sainsbury's supermarket on a filthy, stinky landfill site. People weren't allowed to smoke due to the methane emanating from the rubbish. A few years later, unsurprisingly, I saw on the television news that the whole place had burned to the ground.

What was your worst mistake (and what did you learn)? Investing in the stock market a few months before Black Wednesday. I learned that those who claim to be able to judge the behaviour of a chaotic system like the stock market are talking nonsense.

What does your average work day involve?

Generally it is spent in front of a computer designing a control system for a robot and then testing it out in the real world.

What qualities do you most admire in other people?

Compassion, kindness and perseverance.

Favourite film?

Life of Brian.

Your Achilles heel?

Sticky toffee pudding.

Your perfect day?

A bicycle ride in the country on a sunny day.