# Human-Artificial Intelligence Partnerships

Professor Nick Jennings

In our increasingly connected world, computation is everywhere and we are generating ever more data about everything. These trends will profoundly change the ways in which we work with computers. Specifically, we need the machines to be smarter and more helpful. Central to this vision is the means by which we can forge effective partnerships with such artificial intelligence (AI) systems. Until now, humans have generally been the masters and technology the slave. This needs to change. Today's AI systems can act on high-level human commands and achieve complex goals in a flexible manner. But, while such systems are good at solving narrowly defined tasks, they don't know how to collaborate with humans or how to operate as part of a problem-solving team. This talk will explore how humans and AI systems can work together. In such *partnerships,* the humans and the AI systems complement each other's strengths and weaknesses, leading to a rise in the humans, as well as in the machines. Drawing on multi-disciplinary work in the areas of AI, autonomous systems, machine learning, crowd sourcing and ubiquitous computing, this talk explores the scientific underpinning of such systems, the applications they have been applied to, and the societal implications of their widespread adoption.

Bio

**Nick Jennings** is Vice-Provost (Research) and Professor of Artificial Intelligence at Imperial College London. Before joining Imperial, he was the Regius Professor of Computer Science at the University of Southampton (a post created by the monarch to recognise research excellence) and the UK Government's Chief Scientific Advisor for National Security. Nick is an internationally-recognized authority in the areas of artificial intelligence, autonomous systems, cybersecurity and agent-based computing. His research covers both the science and the engineering of intelligent systems. In undertaking this research, he has attracted grant income of over £25M, published more than 600 articles and graduated 44 PhD students. With over 65,000 citations and an h-index of 110, he is recognised as highly cited by ISI Web of Science in both the Engineering and the Computer Science categories. He has received a number of international awards for his research including the Computers and Thought Award and the ACM Autonomous Agents Research Award. He is a Fellow of the Royal Academy of Engineering, the Institute of Electrical and Electronic Engineers, the British Computer Society, the Institution of Engineering and Technology, the Association for the Advancement of Artificial Intelligence (AAAI) and the European Artificial Intelligence Association (EurAI) and a member of Academia Europaea. He was made a Companion of the Order of the Bath (CB) in the Queen's New Year Honours List in 2016 for his services to computer science and national security science.