



Ciclo de Seminários

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Lecturer

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Understanding and Modelling Consciousness

The first part of my talk will explain how our modern concept of consciousness emerged. In the 17th Century many people used the properties of invisible atoms to explain regularities in the world. This led to a distinction between primary qualities, such as size, which were properties of the atoms, and secondary qualities, such as colour, which appeared when atoms interacted with our senses. Secondary qualities were real non-physical properties that had to be accommodated somewhere. Galileo's and Locke's solution was to locate secondary qualities in consciousness. While modern science has more elaborate physical descriptions, consciousness continues to be a placeholder for experiences that cannot be captured by a physical description. Philosophers often study the relationship between consciousness and the physical world using thought experiments. A more promising methodology is to measure consciousness, measure the physical world and look for correlations between the two sets of data. Using this scientific approach, we might be able to discover precise mathematical relationships between measurements of consciousness and measurements of the physical world, which could be used to make accurate predictions about conscious states. Lastly, I will discuss how scientific research on consciousness connects with models of consciousness and conscious machines.

Holding two PhDs, one in Computing and Electronic Systems and the other in Philosophy, both from Essex University, David Gamez is currently a lecturer at the Department of Computer Science, Middlesex University. From 2012-2015 he was supported by a JTF Turing Research Fellowship at the Sackler Centre for Consciousness Science, working on the scientific study of natural and artificial minds. He worked (2010-2012) with Murray Shanahan at the Department of Computing at Imperial College London on the EPSRC project 'Modular Neural Simulation with Reconfigurable Hardware', integrating the NeMo-CUDA-accelerated neural simulator with his SpikeStream neural nets in the development of the Spike sensory interface for the Cub robot. He also worked (2009-2010) with Igor Aleksander on a new technique for analyzing neural networks for information integration. His PhD on machine consciousness (supervised by Prof. Owen Holland) was carried out as part of the CRONOS project to build a conscious robot. His most recent book, Human and Machine Consciousness, explains how we can develop a science of consciousness that can make accurate predictions about the consciousness of humans, animals and machines.

segunda-feira

11:00hs

16 de dezembro

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