

Professor Glyn Humphreys



Professor Glyn Humphreys' work focuses on understanding the functions and structure of the brain, particularly how we learn and process the world around us. This uses the newest functional MRI imaging techniques to visualise activity in the brain.

Much of Glyn's work focuses on using discoveries about the brain to help patients with neuropsychological conditions like stroke recover more effectively. This requires an understanding of how damage to the brain's structure affects actions like vision or movement.

Glyn is also one of the key researchers involved in harnessing the power of robotics with the University's existing work in brain imaging. This opens the way for the development of robotic devices controlled by the brain that could be used in rehabilitation after brain injury or stroke.

For example, stroke patients with the disorder visual neglect don't always notice things on the affected side of their body, and they often end up bumping into objects or failing to find what they are looking for. An assistive device that cues them to look to their bad side or that registers when an obstacle is approaching, would help patients become more independent.

Similarly, both stroke patients and patients with dementia can get mixed up when they are carrying out everyday activities like making a cup of tea. Having an intelligent environment that cues the patients as to which objects to use next can be useful in retraining independent living activities.

“ Professor Glyn Humphreys "By linking our research in computational neuroscience and cognitive robotics to our work in cognitive ageing, we will be able to help patients. We can train computers to interpret brain activity to learn, such as whether someone wants to steer a wheelchair to the left or right. We will be developing techniques that use ongoing brain activity to enable computers to make actions and responses that patients may no longer be capable of making."**”**