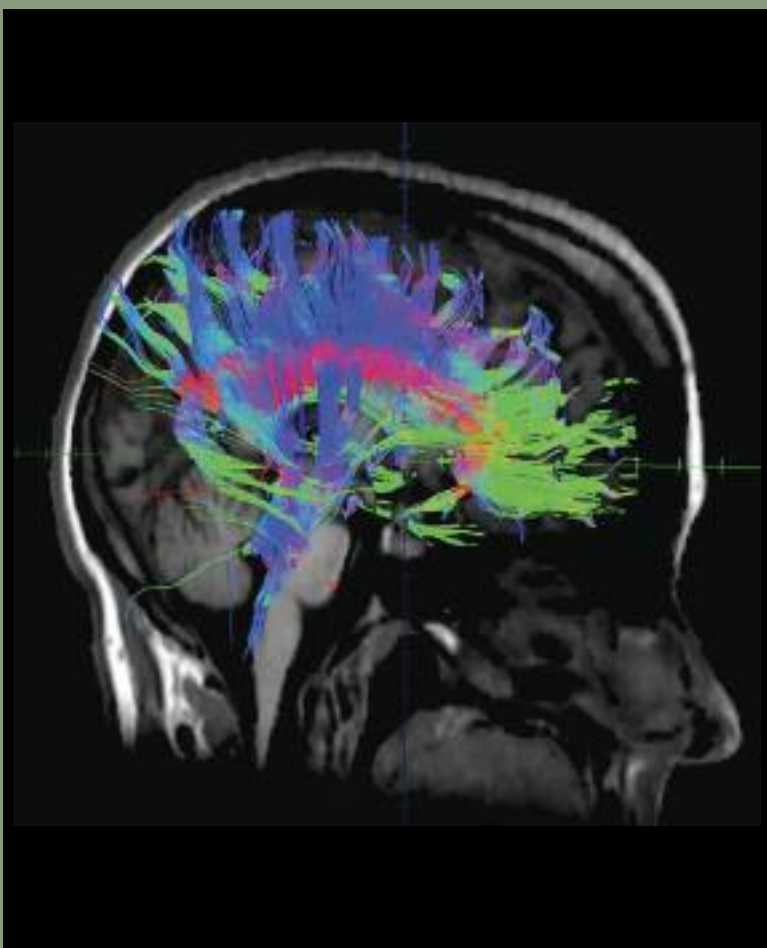




Neuroimaging Lab

Centre for Vision Research

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Magnetic resonance imaging (MRI) is a technique that uses radio waves, very strong magnetic fields, and the properties of atomic nuclei to create images of an object. Functional MRI (fMRI) is a technique used to observe the inner workings of the brain. During experiments, researchers take a complete MRI picture of a subject's brain every few seconds. By measuring small blood flow changes over time, researchers observe how brain areas become more or less active while a subject performs a task, makes decisions or reacts to a visual image.



York researchers use fMRI to study the relationship between specific mental functions and activity in certain brain areas. fMRI helps us to understand and map how the brain normally works – such as the areas responsible for speech or vision – and what goes wrong when it does not function properly. If a patient has had a stroke, for example, an fMRI scan can help determine which brain areas are not working properly and predict how this will impact the patient's life.

This fMRI research has many applications to human health, and York researchers are using it to study such areas as dyslexia, migraines, aging, monocular blindness, movement disorders, schizophrenia, multiple sclerosis and traumatic brain injury.

