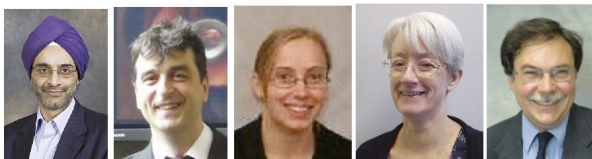


## NOTTINGHAM

### Institutions

The Sir Peter Mansfield Imaging Centre (SPMIC) is an interdisciplinary centre for innovative imaging in experimental and translational medicine at the University of Nottingham, which builds on world-leading expertise in multi-modal imaging physics, quantitative imaging biomarker development, and experimental medicine.

### Principal Investigators



Nin Bajaj Richard Bowtell Sue Francis Penny Gowland Peter Morris

### 7T equipment

Hardware Whole body MR (Philips)- research only (32ch head coil, 8 eh parallel transmission)  
Operational since 2006  
Other equipment (human imaging research only): 3T MR (Philips Ingenia/Philips Achieva/GE); iST (Philips/GE), O.ST Upright MR (Paramed), MEG (CTF), Spinlab DNP system, MR-compatible EEG and NIRS.

### 7T Methods (as relevant for EUFIND)

#### Acquisition

- High-resolution fMRI including multiband
- High-resolution anatomical imaging
- ASL, VASO
- QSM
- MT and CEST
- MRS (13C and 1H)
- EEG/fMRI
- BOLD imaging

#### Analysis

- Integration of MEG and fMRI networks and myelination mapping
- High resolution fMRI data analysis
- Methods for rs-fMRI
- QSM analysis
- Post mortem correlations
- Neurovascular coupling

### Research in neurodegeneration

#### Clinical and basic research topics

- Multiple Sclerosis
- Parkinson's Disease
- Early onset Alzheimer's disease
- Development of biomarkers particularly related to white matter changes

#### Cohorts

- UK7T Network normal subjects
- UK7T Network dementia cohort

### Ethics Procedures

Approval for healthy controls (over 18) in place. Patients require additional ethics.