



Job title	Research Assistant	Job family and level	Research and Teaching, level 4a
School/ Department	School of Medicine/Mental Health & Clinical Neurosciences	Location	The East Midlands Campuses of the University of Nottingham

Purpose of role

The purpose of this role will be to conduct research in developing novel neuroimage methods for the harmonisation of brain MRI data. Specifically, you will use the lab's recently developed ON-Harmony harmonisation resource to investigate how small cohorts can be harmonised to the UK Biobank, making use of the recent extension to ON-Harmony to include UK Biobank scanners.

You will join an established team, led by a Professor of Computational Neuroimaging (<https://conilab.nottingham.ac.uk>), whose main areas of research interest include the development of innovative neuroimaging technologies for mapping the brain at a systems level. The team has a track record in brain connectivity and microstructure mapping using multi-modal MRI, with a portfolio of research programmes, including funding from the European Research Council (ERC) that supports this position. They are part of the Sir Peter Mansfield Imaging Centre (SPMIC), birthplace of MRI and soon to be home of the ultra-high field (11.7T) UK national facility.

You will have the opportunity to use your initiative and creativity to identify areas for research, develop research methods and extend your research portfolio.

The School of Medicine recognise the importance of continuous professional development and therefore the importance of providing opportunities, structured support and encouragement to engage in professional development each year.

To find out more about the School of Medicine, its values, vision, teaching and research, please see our [further information leaflet](#).

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	Research: To undertake supervised research, which may include planning, preparing, setting up, conducting and recording the outcome of experiments and fieldwork, developing questionnaires and conducting surveys within the framework of an agreed programme.	60%



	- To conduct literature and database searches and carry out analyses and/or tests and/or critical evaluations using specified and agreed techniques, approaches and/or models and document findings. - To work in conjunction with others in the research team to achieve the research project objectives within the required timeline.	
2	Engagement and Communication: - To contribute to the production of research reports and publications and prepare and present papers on research progress and outcomes to relevant groups including external bodies. - To communicate information and ideas to students and advise and assist other staff/students within area of expertise. - To build relationships with internal and external contacts to develop knowledge and understanding and form relationships for future collaborations	20%
3	Development: To continue to develop skills in and knowledge of research methods and techniques and contribute to the development of/or choice of techniques, models, methods, critiques and approaches.	20%
4	Other: Any duties appropriate to the grade and level of the post	N/A

Person specification

	Essential	Desirable
Skills	- Excellent oral and written communication skills, including the ability to communicate with clarity on complex information. - Evidence of sufficient breadth or depth of research methodologies and techniques to work in research area. - Developing research skills. - Ability to contribute to method improvement. - Analytical ability to facilitate conceptual thinking, innovation and creativity. - Ability to use neuroimage analysis packages, such as FSL/SPM/FreeSurfer.	- Demonstrates a desire to further develop skills and knowledge of research methods and techniques. - Ability to use computing clusters/servers for high-performance scientific computing. - Ability to analyse large datasets.



	• Ability to build relationships and collaborate with others, internally and externally. • Evidence of proficiency with coding and the development of software tools/scripts (e.g. C / C++ / Python / Matlab / Julia / shell scripting)	
Knowledge and experience	• Experience of brain MRI image processing and analysis in research projects. • Experience in use of research methodologies and techniques to work within research area. • Journal publications in the field of neuroimaging. • Experience of software version control and coding repositories. • Knowledge of statistical theory for data analysis. • Familiarity with distortion correction in MRI.	• Some practical experience of applying the specialist skills approaches and techniques required for the role. • Evidence in use of research methodologies and techniques to work within research area. • Experience with HCP/UKBiobank processing pipelines or similar for neuroimage processing. • Experience with multi-modal neuroimaging analyses (e.g. structural/diffusion/functional MRI). • Some exposure to harmonisation methods (e.g. COMBAT and/or relevant AI approaches). • Experience with modelling for repeated measurements (e.g. mixed effects models)
Qualifications, certification and training (relevant to role)	• Degree or equivalent in relevant subject area, such as Engineering/ Physics/Neuroscience/Computer Science/Applied Mathematics.	• Master's Degree, or equivalent in relevant subject area, such as Engineering/Physics/ Computational Neuroscience/ Computer Science.
Other	• Willingness to adopt the vision and values of the School of Medicine.	



**Athena
Swan**
Gold Award



**Race
Equality
Charter**
Bronze Award





Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
Taking ownership	Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
Forward thinking	Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
Professional pride	Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
Always inclusive	Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others

