<table>
<thead>
<tr>
<th>Job title</th>
<th>Postdoctoral Research Assistant Modelling the Development of Functional Connectivity in the Perinatal Brain</th>
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</thead>
<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences Division</td>
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<tr>
<td>Department</td>
<td>Nuffield Department of Clinical Neurosciences (NDCN)</td>
</tr>
<tr>
<td>Location</td>
<td>WIN/FMRIB Centre, University of Oxford, John Radcliffe Hospital, Oxford</td>
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<tr>
<td>Grade and salary</td>
<td>Grade 8: £39,992 - £52,132 per annum</td>
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<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed-term (2 years in the first instance)</td>
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<tr>
<td>Reporting to</td>
<td>Prof Stephen Smith</td>
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<tr>
<td>Vacancy reference</td>
<td>132426</td>
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<td>Additional info</td>
<td>A Grade 7 (31,604 - £42,418) appointment, with an appropriate adjustment in duties, would be considered should a suitable candidate not be sourced at Grade 8.</td>
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</tbody>
</table>

- **Research topic**: Functional Connectivity Mapping in the Developing Brain
- **Principal Investigator / supervisor**: Prof Stephen Smith
- **Project team**: FMRIB Analysis Group / Developing Human Connectome Project
- **Project web site**: https://www.ndcn.ox.ac.uk/divisions/fmrib/fmrib-analysis-group
  http://www.developingconnectome.org/
- **Funding partner**: The funds supporting this research project are provided by Developing Human Connectome Project / European Research Council

**The role**

The post holder will work on new methods for modelling the development of brain networks in utero and post-birth, via functional connectivity mapping and biophysical modelling using MRI data. The post is funded by the European Research Council as part of the Developing Human Connectome Project.
(dHCP). The dHCP is a collaborative effort between King’s College, Imperial College and Oxford which is mapping and modelling human brain circuitry in over 1000 babies (in utero and in vivo) using diffusion and functional MRI to gain insight into normal brain development. This role will involve the development, testing, and release of analysis methods and software to be applied to this and related datasets.

The post will be based within the Oxford University Centre for Functional Magnetic Resonance Imaging of the Brain (FMRIB) that is located on the John Radcliffe Hospital site in Oxford. The post holder will be a member of the Analysis research group that forms part of the FMRIB Centre. The FMRIB Centre Analysis Group conducts research in methods and modelling of brain imaging data, including functional MRI, diffusion MRI, structural MRI, EEG, and more recently MEG data. The members of the Analysis group have developed the widely used FMRIB Software Library (FSL) package, which enables the methods created within FMRIB to have a worldwide impact on the neuroimaging community. Further information about the Analysis research group can be found at the following web address: http://www.ndcn.ox.ac.uk/research/analysis-group.

Responsibilities


2. Training: Train in relevant areas of image analysis, programming, neuroimaging, and neuroscience, if required.

3. Research Implementation: Implement methods to infer on, and validate, models describing brain activity and connectivity.

4. Research Dissemination: Publish and present research results to the international scientific community through conference presentations and journal publications. Provide research tools, initially to researchers within the dHCP project, and eventually to the wider research community.

5. Collaboration: Establish and manage extensive collaboration network within the ERC-funded dHCP project of connectivity-mapping research.

6. Teaching: Contribute to graduate training and supervision of undergraduate or graduate research students for work related to above.

7. Career Development: In the context of work above and resources available, with the support of the laboratory, prepare for appropriate career advancement.
Selection criteria
1. PhD in relevant area and/or relevant post-doctoral experience.
2. Expertise in software programming (C/C++ and MATLAB).
3. Excellent academic track record.
4. Understanding of Bayesian statistics and statistical modelling.
5. Ability to write clearly.
6. Experience in signal or image processing.

Desirable selection criteria
1. Experience in biophysical modelling and/or connectivity mapping using diffusion/resting-state functional MRI.
2. Strong publication record in neuroimaging methods development.
3. Teaching/training abilities.
4. Ability to work independently.
5. Excellent presentation skills (written and oral).

About the University of Oxford
Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford’s researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, and in providing all of our staff with a welcoming and inclusive workplace that supports everyone to develop and do their best work. Recognising that diversity is a great strength, and vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual’s unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe’s most entrepreneurial universities. Income from external research contracts in 2014/15 exceeded £522.9m and ranked first in the UK for university spin-outs, with more than 130 spin-off companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.
For more information please visit www.ox.ac.uk/about/organisation

Medical Sciences Division
The Medical Sciences Division is an internationally recognized centre of excellence for biomedical and clinical research and teaching, and the largest academic division in the University of Oxford. World-leading programmes, housed in state-of-the-art facilities, cover the full range of scientific endeavour from the molecule to the population. With our NHS partners we also foster the highest possible standards in patient care.

For more information please visit: www.medsci.ox.ac.uk

The Nuffield Department of Clinical Neurosciences
The Nuffield Department of Clinical Neurosciences (NDCN), led by Prof Irene Tracey, has over 350 staff and 100 postgraduate students. NDCN has an established research and teaching portfolio with a national and international reputation for excellence.

NDCN is based in high quality research and clinical facilities in the West Wing of the John Radcliffe Hospital, alongside the Department’s world-class Oxford Centre for Functional MRI of the Brain (FMRIB), the Weatherall Institute of Molecular Medicine (which houses 3 of our research groups) and provides the ideal facilities to translate research from bench to bedside. In keeping with the award of NIHR Comprehensive Biomedical Research Centre status, to a partnership between Oxford University and the Oxford Radcliffe Hospitals NHS Trust, we have developed a highly integrated and interdisciplinary environment in which research, teaching, clinical training and clinical care interact. This enables us to establish new approaches to the understanding, diagnosis and treatment of brain diseases. To this end the Department fosters collaborations worldwide and warmly welcomes visiting scientists, clinical fellows and students. The Department comprises five sections:

For more information visit: www.ndcn.ox.ac.uk

Nuffield Division of Anaesthesia
NDA is led by Associate Professor Andrew Farmery. The NDA is committed to the development and maintenance of internationally competitive research programmes in pain and consciousness; respiration and hypoxia; adult and neuro-intensive care; simulation and human factors training.

For more information visit www.nda.ox.ac.uk

Division of Clinical Neurology
DCN is led by Professor Kevin Talbot. DCN is committed to the development of research programs that improve understanding of the nervous system in health and disease.

For more information visit www.dcn.ox.ac.uk
Centre for Functional Magnetic Resonance Imaging of the Brain
FMRIB is led by Professor Heidi Johansen-Berg. FMRIB is an internally recognised human neuroimaging centre housing both 3T and 7T scanners. The Centre has strong programmes of research in MR physics, image analysis and the applications of neuroscience in health and disease.

For more information visit www.fmrib.ox.ac.uk

Nuffield Laboratory of Ophthalmology
NLO is led by Professor Russell Foster, who leads the Sleep & Circadian Neuroscience Institute. NLO pursues scientific and clinical research into a range of areas related to vision, the eye and circadian neuroscience.

For more information visit www.nlo.ox.ac.uk

Centre for the Prevention of Stroke & Dementia
CPSD is led by Professor Peter Rothwell. The centre carries out research that increases understanding of the causes of cerebrovascular disease. Its aims are to improve prevention of stroke and dementia by earlier diagnosis, more reliable prognostication, and more effective use of existing preventive treatments in routine clinical practice.

For more information visit https://www.ndcn.ox.ac.uk/divisions/cpsd

Working at NDCN
NDCN actively promotes a healthy work life balance amongst employees through a number of family friendly policies. See http://www.admin.ox.ac.uk/personnel/staffinfo/benefits/ for further information.

The University of Oxford is a member of the Athena SWAN Charter and holds an institutional Bronze Athena SWAN award. The Department of Clinical Neurosciences holds a departmental Silver Athena award in recognition of its efforts to introduce organisational and cultural practices that promote gender equality and create a better working environment for both men and women.

How to apply
Before submitting an application, you may find it helpful to read the ‘Tips on applying for a job at the University of Oxford’ document, at www.ox.ac.uk/about/jobs/supportandtechnical/.

If you would like to apply, click on the Apply Now button on the ‘Job Details’ page and follow the on-screen instructions to register as a new user or log-in if you have applied previously. Please provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and a supporting statement. The supporting statement should explain how you meet the selection criteria for the post using examples of your skills and experience. This
may include experience gained in employment, education, or during career breaks (such as time out to care for dependants).

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

Please upload all documents as PDF files with your name and the document type in the filename.

All applications must be received by midday on the closing date stated in the online advertisement.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing departments.

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments)

Should you experience any difficulties using the online application system, please email recruitment.support@admin.ox.ac.uk. Further help and support is available from www.ox.ac.uk/about_the_university/jobs/support/. To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will be notified of the progress of your application by automatic emails from our e-recruitment system. Please check your spam/junk mail regularly to ensure that you receive all emails.

Important information for candidates

Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard pre-employment screening, as applicable to the post. This will include right-to-work, proof of identity and references. We advise all applicants to read the candidate notes on the University’s pre-employment screening procedures, found at: www.ox.ac.uk/about/jobs/preemploymentscreening/.
The University’s policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. From 1 October 2017, the University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at grade 8 and above. The justification for this is explained at: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

For existing employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

From 1 October 2017, there is no normal or fixed age at which staff in posts at grades 1–7 have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of Opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Training and Development

A range of training and development opportunities are available at the University. Further details can be found at www.ox.ac.uk/staff/working_at_oxford/training_development/index.html.

For research staff only: Support for Research Staff

There is a particularly wide range of support for career development for research staff. Please visit: www.ox.ac.uk/research/support-researchers to find out more.

Pensions

The University offers generous occupational pension schemes for eligible staff members. Further details can be found at www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/.

Information for international staff (or those relocating from another part of the UK)

A wealth of information is available on the University’s International Staff website for staff who are relocating to Oxford from abroad, at www.admin.ox.ac.uk/personnel/staffinfo/international/.
The University of Oxford Newcomers' Club
The Newcomers' Club is aimed at helping partners of newly-arrived visiting scholars, graduate students and academic members of the University to settle in and to meet people in Oxford.

Transport schemes
The University offers a range of travel schemes and public transport travel discounts to staff. Full details are available at www.admin.ox.ac.uk/estates/ourservices/travel/.

University Club and University Sports Facilities
The University Club provides social, sporting and hospitality facilities. It incorporates a Club bar, a cafe and sporting facilities, including a gym. See www.club.ox.ac.uk for all further details.

University staff can use the University Sports Centre at discounted rates, and have the chance to join sports clubs. Please visit www.sport.ox.ac.uk/oxford-university-sports-facilities.

Childcare and Childcare Vouchers
The University offers quality childcare provision services at affordable prices to its employees. For full details about the services offered, please visit www.admin.ox.ac.uk/childcare/. NB: Due to the high demand for the University’s nursery places there is a long waiting list.

The University also offers nursery fee payment schemes to eligible staff as an opportunity to save tax and national insurance on childcare costs. Please visit www.admin.ox.ac.uk/childcare.

Disabled staff
The University is committed to supporting members of staff with a disability or long-term health condition and has a dedicated Staff Disability Advisor. Please visit www.admin.ox.ac.uk/eop/disab/staff for further details.

BUPA - Eduhealth
Bupa Eduhealth Essentials private medical insurance offers special rates for University of Oxford staff and their families www.eduhealth.co.uk/mini-site/.

All other benefits
For other benefits, such as free entry to colleges, the Botanic Gardens and staff discounts offered by third party companies, please see www.admin.ox.ac.uk/personnel/staffinfo/benefits/.