



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Research Assistant in Structural Design of Reinforced Concrete - Restraint of Imposed Strains, Faculty of Engineering and Physical Sciences**



**Salary: Grade 6 (£32,296 – £37,999 p.a.) Due to funding restrictions, an appointment will not be made higher than £32,296 p.a.**

**Reference: EPSCV1160**

**Location: Leeds main campus (with scope for hybrid working)**

**Closing date: Tuesday 25 February 2025**

**Fixed-term starting from 01 March 2025 until 31 October 2025**

**We are open to discussing flexible working arrangements**

# **Research Assistant in Structural Design of Reinforced Concrete - Restraint of Imposed Strains, School of Civil Engineering.**

**Are you an enthusiastic and experienced researcher in reinforced concrete design? Are you looking for a new and exciting challenge as part of an international academic / industry collaboration? Do you want to create more efficient and sustainable building practices?**

Applications are invited for a full-time researcher based in the School of Civil Engineering, University of Leeds. The successful applicant will join the Materials and Structures research group and the Neville Centre of Excellence as a member of the research staff and will conduct research on an EPSRC-funded project entitled 'Understanding the cracking behaviour of reinforced concrete elements subjected to the restraint of imposed strains'. The work will be conducted under the supervision of Professor John P Forth and Prof Nick Nikitas.

The primary focus of the project is to provide practising engineers with the ability to correctly design RC elements for the restraint of short and long-term imposed strains.

The researcher will be involved in developing physical understanding of behaviour through an experimental study, developing NLFEA models which enable the realistic calculation of crack width in walls, developing a design oriented analytical procedure for the design of crack control reinforcement in walls, and further validation of the resulting procedures by comparison with field data from walls.

## **What does the role entail?**

As a Research Assistant, your main duties will include:

- Planning and carrying out laboratory experiments into restraint induced cracking in reinforced concrete walls;
- Developing design procedures for RC elements subject to all forms of external restraint;
- Developing nonlinear finite element modelling procedures, and a design oriented analytical procedure;



- Supporting research activities, including contributing to research results and outputs and to the generation of original ideas, ensuring a successful programme of investigation;
- Writing reports, undertaking literature reviews and preparing papers for publication, with guidance as necessary;
- Collating and analysing data to inform the direction and progression of the research project;
- Participating in the research group and presenting research output where appropriate;
- Working both independently and as part of a larger team of researchers and stakeholders;
- Contributing to the research culture of the School, where appropriate;
- Continually updating your knowledge, understanding and skills in the research field.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

## What will you bring to the role?

As a Research Assistant you will have:

- An undergraduate or masters degree in structural engineering using reinforced concrete or a closely allied discipline;
- A strong background in the time-dependent behaviour of reinforced concrete and structures;
- Ability to carry out nonlinear finite element analysis of concrete structures;
- Good interpersonal and communication skills, both written and verbal and the ability to communicate effectively with a wide range of stakeholders;
- Well-developed analytical skills;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both individually and in a team;
- The ability to work accurately, unsupervised and use your own initiative.



You may also have:

- A PhD (or close to completion) in structural engineering using reinforced concrete or a closely allied discipline;
- Experience of contributing to the writing of papers for publication;
- Proven experience of the ability to interact with either PhD students, Masters students, or undergraduates in ways that will enhance the student experience in the School;
- Ability to contribute to and develop interdisciplinary collaborative research projects in a broad range of engineering applications.

## How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23:59** (UK time) on the advertised [closing date](#).

## Contact information

To explore the post further or for any queries you may have, please contact:

[Professor John P Forth](#), Director of the Neville Centre of Excellence in Cement and Concrete Engineering

Tel: +44 (0)113 343 2270

Email: [J.P.Forth@leeds.ac.uk](mailto:J.P.Forth@leeds.ac.uk)

## Additional information

### Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the [School of Civil Engineering](#).

### Working at Leeds

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.



## **A diverse workforce**

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

## **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by emailing HR via [hr@leeds.ac.uk](mailto:hr@leeds.ac.uk).

## **Criminal Record Information**

### **Rehabilitation of Offenders Act 1974**

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

## **Salary Requirements of the Skilled Worker Visa Route**

Please note that due to Home Office visa requirements, this role may only be suitable for first-time Skilled Worker visa applicants if they are eligible for salary concessions. For more information, please visit [the Government's Skilled Worker visa page](#).



For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa](#).

