

## Job Description

<b>Job Title:</b>	Research Associate
<b>Department/Division/Faculty:</b>	Department of Civil and Environmental Engineering, Faculty of Engineering
<b>Campus/Location:</b>	South Kensington Campus
<b>Job Family/Level:</b>	Research Job Family, Research Associate* ( <a href="#">Research salary scale</a> )
<b>Responsible to:</b>	Professor Leroy Gardner
<b>Key Working Relationships (Internal):</b>	Professor Leroy Gardner, Technicians, Staff within the Structures Section
<b>Contract type:</b>	Full time, fixed term until 28 February 2025.

### Purpose of the Post

The primary focus of the research project is the testing, simulation and design of innovative and efficient cold-formed steel structural systems.

- Conduct experiments on cold-formed steel structural systems
- Develop numerical simulations of these systems and perform parametric studies
- Develop a design framework and relevant recommendations for the structural systems
- Disseminate the generated data and design recommendations to practicing engineers, researchers and code drafting committees.

### Key Responsibilities

Research Duties:

- To take the initiative in the planning of research
- To direct the work of small research teams
- To identify and develop suitable techniques, and apparatus, for the collection and analysis of data
- To conduct data analysis
- To ensure the validity and reliability of data at all times
- To maintain accurate and complete records of all findings
- To write reports for submission to research sponsors
- To present findings to colleagues and at conferences
- To submit publications to refereed journals
- To provide guidance to staff and students
- To attend relevant workshops and conferences as necessary
- To develop contacts and research collaborations within the College and the wider community
- To promote the reputation of the Group, the Department and the College
- To provide guidance to PhD Students
- To contribute to bids for research grants
- To conduct and plan own scientific work with appropriate supervision.
- To maintain highly organised and accurate record of experimental work
- To actively participate in the research programme of the Group
- To publish in high quality journals and to present data at national and international meetings
- To participate in Group research meetings and internal seminars
- To collaborate with other allied scientists within Imperial College and elsewhere in London and abroad, as appropriate

- To contribute to the smooth running of the Group's laboratories and, facilities with other scientists, clinicians, technicians and students within the laboratories
- Assist in the supervision of undergraduate and postgraduate research students and research assistants as required
- To comply with the College and Department safety practices and to attend courses on safety when appropriate
- Any other duties as may be deemed reasonable by Head of group as well as Head of Division/Department/Section

Other Duties:

- To undertake any necessary training and/or development
- To undertake appropriate administration tasks
- To attend relevant meetings

Where Imperial or funder conditions necessitate, you will be required to complete timesheets for your work on projects in a timely manner.

## Person Specification

Requirements	Essential (E)/ Desirable (D)
Candidates/post holders will be expected to demonstrate the following:	
<b>Education</b>	
Hold a PhD in structural engineering or a closely related field, or equivalent research, industrial or commercial experience, as well as an excellent honours degree and ideally MSc in Civil/Structural engineering <i>*Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistant.</i>	E
<b>Experience</b>	
Practical experience within a research environment and / or publication in relevant and refereed journals	E
Previous experience in use of advanced experimental methods	E
A very strong understanding of structural behaviour	E
Previous experience of using relevant technical software (ABAQUS, Python, Matlab)	E
<b>Knowledge</b>	
Knowledge of stainless steel	E
Knowledge of behaviour under extreme loading	E
<b>Skills &amp; Abilities</b>	
Ability to conduct a detailed review of recent literature	E
Ability to develop and apply new concepts	E
Ability to carry out experimental laboratory work on structural members	E
Excellent verbal communication skills and the ability to deal with a wide range of people	E
Excellent written communication skills and the ability to write clearly and succinctly for publication	E
Ability to organise own work with minimal supervision	E
Ability to prioritise own work in response to deadlines	E
Ability to direct the work of a small research team and motivate others to produce a high standard of work	E
<b>Other</b>	

Willingness to work as part of a team and to be open-minded and cooperative	E
Flexible attitude towards work	E
Discipline and regard for confidentiality and security at all times	E
Willingness to undertake any necessary training for the role	E
Willingness to travel both within the United Kingdom and abroad to conduct research and attend conferences	E
Willingness to work out of normal working hours (including weekends) if the requirements of the project demand	E

## Further Information

Please note that job descriptions cannot be exhaustive, and the post-holder may be required to undertake other duties, which are broadly in line with the above key responsibilities.

Imperial College is committed to equality of opportunity and to eliminating discrimination. All employees are expected to follow the [Imperial Values & Behaviours framework](#). Our values are:

- Respect
- Collaboration
- Excellence
- Integrity
- Innovation

Employees are also required to comply with all College policies and regulations paying special attention to: Confidentiality, Conflict of Interest, Data Protection, Equal Opportunities, Financial Regulations, Health and Safety, Information Technology, Smoking, Private Engagements and Register of Interests. They must also undertake specific training and assume responsibility for safety relevant to specific roles, as set out on the [College Website Health and Safety Structure and Responsibilities](#) page.

The College is a proud signatory to the San-Francisco Declaration on Research Assessment (DORA), which means that in hiring and promotion decisions, we evaluate applicants on the quality of their work, not the journal impact factor where it is published. For more information, see <https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-evaluation/>

The College believes that the use of animals in research is vital to improve human and animal health and welfare. Animals may only be used in research programmes which are ultimately aimed towards finding new treatments and making scientific and medical advances, and where there are no satisfactory or reasonably practical alternatives to their use. Imperial is committed to ensuring that, in cases where this research is deemed essential, all animals in the College's care are treated with full respect, and that all staff involved with this work show due consideration at every level. [Find out more about animal research at Imperial.](#)

We are committed to equality of opportunity, to eliminating discrimination and to creating an inclusive working environment for all. We therefore encourage candidates to apply irrespective of age, disability, marriage or civil partnership status, pregnancy or maternity, race, religion and belief, gender identity, sex, or sexual orientation. We are an [Athena SWAN Silver Award](#) winner, a [Disability Confident Leader](#) and a [Stonewall Diversity Champion](#).

October 2022