



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Teaching Fellow in Computational Mechanics
Faculty of Engineering & Physical Sciences



Salary: Grade 7 (£33,199 – £39,609 p.a.)

Reference: ENGME1216

Closing date: 08 September 2019

Fixed-term for up to 2 years

We will consider flexible working arrangements

Teaching Fellow in Computational Mechanics, School of Mechanical Engineering

Are you an enthusiastic and forward-thinking mechanical engineer with strong computational modelling and engineering design analysis skills in areas such as computational fluid dynamics and computational structural mechanics? Do you have experience in supervising individual or team student projects? Do you possess excellent communication skills? Do you want to further your career in one of the UK's leading Universities? Are you passionate about delivering an exceptional student experience in a research-intensive Russell Group University?

We are looking for an outstanding candidate to play a key role in our taught provision of our computational mechanics modules and individual projects in our undergraduate and postgraduate programmes in the [School of Mechanical Engineering](#).

You will be expected to provide teaching and support of our computational mechanics modules and engineering project students who are carrying out their individual projects in the general area of computational mechanics, using simulation tools in project areas such as computational fluid dynamics and computational structural mechanics. This will include providing introductory training for the computational mechanics packages being used by students on their individual projects (e.g. ANSYS Fluent, COMSOL, ABAQUS, Matlab SIMULINK etc.) and on-going support in these to students throughout their projects. You will also supervise your own student projects using one or more of the above computational packages and assist the module leaders of the individual engineering projects modules with general administration and assessment duties on these modules.

You will have an undergraduate degree and PhD or PhD award pending (that is submitted, examined and awarded subject to minor corrections) in Mechanical Engineering or a related discipline, and will hold chartered membership of a relevant professional institution such as the Institution of Mechanical Engineers, or be working towards such a qualification.

What does the role entail?

As a Teaching Fellow, your main duties will include:



- Supporting and delivering computational mechanics modules, including lectures, tutorials and workshops on undergraduate and/or postgraduate taught courses;
- Providing inspirational teaching and learning at different levels at the Leeds campus and if appropriate via visits to our overseas Joint School in Chengdu, including assessment and examinations and contributing towards module design, review and quality assurance mechanisms;
- Providing support and guidance to students, providing timely feedback, acting as a personal tutor, resolving issues and/or referring to specialist parties, where appropriate;
- Specifying and supervising computer-based level 3 and MSc individual engineering projects using computational packages such as ANSYS Fluent, COMSOL, ABAQUS etc. Also acting as examiner of individual student projects;
- Provide effective training and support for students on their projects, in one or more of the following areas: finite element analysis software (Abaqus or COMSOL); computational fluid dynamics software (ANSYS Fluent, COMSOL, Star-CCM or OpenFOAM); programming software (MATLAB and SIMULINK). This support may be in the form of “computational surgeries”. Where appropriate you would be expected to collate software support material and maintain a message board;
- Produce examples of how computational models are development and what software functions are used;
- Providing advice and support to academic staff supervising computer-based student projects, whose students are using computational packages in areas such as computational fluid dynamics and computational structural mechanics;
- Contributing effectively to the administrative processes and committee structures of the School/Faculty;
- Maintaining own professional development.

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?

You will have:

- An undergraduate degree and PhD or PhD award pending (that is submitted, examined and awarded subject to minor corrections) in Mechanical Engineering or a related discipline;
- Chartered membership of a relevant professional institution such as the Institution of Mechanical Engineers, or be working towards such a qualification;
- Research expertise in an area of Mechanical Engineering;
- Proven experience and expertise in using one or more of the following computational engineering packages: FEA (with Abaqus), CFD (with Ansys Fluent) or programming (with MATLAB and SIMULINK);
- Experience of teaching in a University environment, with an enthusiastic approach to teaching computational mechanics, and the ability to interact with students in ways that will enhance the student experience;
- Excellent communication and interpersonal skills with a flexible and co-operative approach and good time management skills;
- Demonstrate motivation, flexibility, enthusiasm and the ability to work effectively both in a team and without direct supervision;
- Experience of contributing to the supervision of undergraduate or postgraduate student projects;
- Willingness to propose initiatives and accept responsibility;
- An ability to work in a cross cultural team.

You may also have:

- A relevant teaching qualification and a Higher Education Academy Fellowship or a commitment to attain one;
- Industrial experience of using computational design analysis tools in engineering design;
- The ability to motivate and engender enthusiasm in others;
- A willingness to learn new techniques and the ability to work in a changing environment;



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, for example if you are applying directly from industry, please contact:

[Professor Harvey Thompson](#), Head of the School of Mechanical Engineering

Tel: +44 (0) 113 343 2136

Email: H.M.Thompson@leeds.ac.uk

Additional information

Faculty and School Information

Further information is available on the research and teaching activities of the [School of Mechanical Engineering](#).

A diverse workforce

The Schools in the Faculty of Engineering & Physical Sciences are proud to have been awarded the Athena SWAN [Bronze](#) or [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.

Working at Leeds

Find out more about the benefits of working at the University and what it's like to live and work in the Leeds area on our [Working at Leeds](#) information page.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@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.

