CANDIDATE BRIEF

Software Development Scientist, School of Earth and Environment, Faculty of Environment

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

Reference: ENVEE1342

Closing date: 8 August 2019

This post is open to job share and flexible working

Software Development Scientist

School of Earth and Environment, Faculty of Environment

Are you an ambitious software developer looking for your next challenge? Do you have a background in high performance scientific computing? Do you want to further your career in one of the UK's leading research-intensive Universities?

The School of Earth & Environment (SEE) is seeking to appoint a Software Development Scientist within the Centre for Environmental Modelling and Computation (CEMAC). CEMAC is an established research computing centre within SEE which aims to substantially enhance the School's research, teaching, impact and outreach capabilities, related to computer modelling, data analysis and visualisation. The successful candidate will join growing team of approximately ten software developers and specialist research computing scientists already working on a broad range of scientific computing projects across the School.

The role will include developing and maintaining several key modelling tools and analysis codes, contributing to progressing scientific understanding of a large range of Environmental science problems. You will have the opportunity to work on a wide variety of scientific codes and to contribute to the scientific development of the research strategy of the School.

You will have a degree (Bachelor's or equivalent qualification) in an appropriate technical, scientific, or engineering discipline, ideally with a strong software engineering component. You will also have a proven track record of developing and maintaining codes to study complex, cutting edge scientific problems, ideally in the physical sciences.

What does the role entail?

As a Software Development Scientist, your main duties will include:

- Carrying out project work on scientific programming, code optimisation, parallel computing, porting models to new platforms, post-processing, data extraction, visualisation, large-scale data handling and storage;

- Contributing to software engineering expertise in model and data science, helping to realise the scientific ambitions of SEE;

- Providing technical computing expertise that enables the translation of SEE research computing into exciting student education experiences;

- Developing and implementing new model codes for incorporation of new scientific process understanding into models, in collaboration with other CEMAC staff and Leeds researchers;

- Implementing and evaluating coding updates for improving numerical efficiency or optimising models for new computer hardware and architectures;

- Contributing technical computing expertise to the high-level training of researchers and students, development of funding proposals, new numerical computing initiatives, and scientific papers;

- Working with the Leeds Advanced Research Computing (ARC) team, Met Office and NCAS Computational Modelling Services (CMS) to ensure researchers meet stringent guidelines and policies associated with their code developments including contributing to model documentation;

- Maintaining effective coding documentation through the CEMAC Models and Data Wiki and other documentation to improve the efficiency with which new researchers learn to develop and exploit models, software and datasets;

- Undertaking continuing 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?

As Software Development Scientist you will have:
- A Degree (Bachelor's or equivalent qualification) in an appropriate technical, scientific, or engineering discipline ideally with a strong software engineering component;

- A proven track record of developing and maintaining codes to study complex, cutting edge scientific problems, ideally in the physical sciences;

- Proficiency in numerical analysis techniques and programming in languages such as FORTRAN, C, C++ and Python;

- A high level of proficiency in Unix-based high performance computing and parallel programming (OpenMP, MPI), including optimisation for these architectures;

- Experience and knowledge of numerical optimisation techniques;

- Experience in running the Met Office Unified Model system;

- Excellent problem solving skills, with the ability to take possession of and provide solutions for complex problems in a multi-disciplinary team environment;

- Experience in working within a software life cycle (liaising with user needs, code design, code testing, source code repositories, version control);

- Ability to work both independently and within a team;

- Ability to work proactively to define, prioritise, organise and complete multiple assignments to meet deadlines;

- Excellent oral and written communication skills, including skills in preparing and making short presentations and documentation on computing topics.

You may also have:

- Experience of working in a highly-rated academic research environment;

- A PhD or Masters degree in a relevant subject.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information. 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:

Dr Steve Arnold, CEMAC Director
Tel: +44 (0)113 343 7245
Email: S.Arnold@leeds.ac.uk

Additional information

Working at Leeds

You can find out more about our generous benefits package and more about what it is like to work at the University and live in the Leeds area in our Working at Leeds information.

Find out more about the Faculty and our School.

Find out more about our Research and associated facilities.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found in our Accessibility information 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.