



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Crop Modelling, Faculty of Environment



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

Reference: ENVEE1322

Closing date: 29 May 2019

Fixed-term for 22 months

We will consider job share / flexible working arrangements

Research Fellow in Crop Modelling

School of Earth and Environment, Faculty of Environment

Are you an ambitious researcher looking to make a positive difference? Do you have a background in crop modelling? Do you want to further your career in one of the UK's leading research intensive Universities?

Recently-approved funding in the [Climate Science for Service Partnership \(CSSP\) Brazil](#) at Leeds presents an opportunity for a skilled crop modeller.

Agriculture is one of the main sectors in the Brazilian economy. Climate change projections in Brazil indicate that higher average temperatures and reduced rainfall in many regions are expected to increase the number of areas under high risk for crop production, with potential food security and socioeconomic impacts. “Developing impacts modelling capability and understanding - Agricultural crop modelling and application” is a two-year project starting in April 2019, part of CSSP-Brazil. The project is led by the University of Leeds in partnership with the Met Office and the Centre for Ecology & Hydrology (CEH) in the UK; and with the Centre for Monitoring and Early Warning of Natural Disasters (CEMADEN) and the University of São Paulo in Brazil. The research team includes expertise in soil, crop, meteorological and hydrological measurements and modelling.

We are seeking a crop modeller to improve and apply the JULES-Crop model in current and future climate scenarios in two of Brazil's main crops, maize and sugarcane, making use of an extensive network of soil moisture sensors and agronomic experiments. The assessment of climate-related food and bioenergy crop production impacts will help inform adaptation decisions and policies, and has clear links to other focus areas of CSSP-Brazil such as mitigation strategies, land use change dynamics and carbon cycling.

You will have a PhD (or be close to obtaining) in crop/plant science, soil science, environmental science or a closely allied discipline and have a strong background in agronomy, crop physiology and phenology, and experience with process-based crop modelling.

As part of the role you may be required to participate in workshops/research visits in Brazil and we anticipate approximately four visits over the appointment, each around 2 weeks in duration



What does the role entail?

As a Research Fellow, your main duties will include:

- Working with [Dr Marcelo Galdos](#) to parameterize, calibrate and evaluate the JULES-Crop model for maize and sugarcane in Brazil;
- Contributing to data management within the project and preparing, with guidance, other project deliverables and presentations in a timely manner;
- Generating and pursuing independent and original research ideas in the subject area;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- Contributing to data management within the project and preparing, with guidance, other project deliverables and presentations in a timely manner;
- Presenting work at project meetings and conferences nationally and internationally as required;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

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 Fellow you will have:

- A PhD (or be near completion – i.e. the initial thesis needs to have been handed in at the point of application) in crop/plant science, soil science, environmental science or a closely allied discipline;



- A strong background in agronomy, crop physiology and phenology;
- Experience with process-based crop modelling;
- The ability to analyse geospatial agricultural datasets;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- A proven track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication skills including presentation skills;
- A proven ability to work well both individually and in a team;
- A willingness to travel to Brazil to participate in workshops and research visits as required.

You may also have:

- Working knowledge of Geographic Information Systems and remote sensing;
- Working knowledge of coding languages (ex: Matlab, R, Python, etc.);
- Experience with soil and climate modelling.

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:

[Dr Marcelo Galdos](#), University Academic Fellow

Tel: +44 (0)113 343 9102

Email: m.galdos@leeds.ac.uk



Additional information

Find out more about the [Climate Impacts Group](#).

Find out more about the [Faculty of Environment](#).

Find out more about [Athena Swan](#) in the Faculty.

Find out more about our [School](#).

Find out more about our [Research and associated facilities](#).

Working at Leeds

Find out more about the benefits of working at the University and what it is 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.

