

Dear all

A few items for you this week:

- An Integrated Ecological Systems Modeller position at EcoBalance (see attached PDF)
- A PhD project opportunity for *Incorporating climate change projections in Australia's flood guidance* at the University of Melbourne
<https://apps.eng.unimelb.edu.au/research-projects/index.php?r=site/webView&id=752>
- A Postdoctoral Fellowship in modelling erosion hazards at CSIRO in Canberra
<https://jobs.csiro.au/job/Canberra%2C-ACT-CSIRO-Postdoctoral-Fellowship-in-Modelling-Erosion-Hazards/724662800/>

If you would like something included in this digest please email it to office@mssanz.org.au

kind regards, Karen



March 12, 2021

Integrated Ecological Systems Modeller

EcoBalance is seeking an outstanding individual to work on advanced integrated models of agro-ecosystems. This includes spatio-temporal, non-linear integrated dynamical models for assessing the health and resilience of these systems, including the interaction of natural, built, human, and social capital. This includes estimation of carbon fluxes, water quality, biodiversity, soil health, and resilience.

The ideal candidate should have a strong background in dynamical systems, spatial modelling, and experience in working with multiple sources of data and information across diverse disciplines. In addition, excellent communication skills, both oral and written, are essential. The ability to work effectively with others and have good time management skills are also essential.

You will be joining an experienced and highly motivated team of experts in their domain. We want to have an impact on Climate Change by providing insights to unlock investment into regenerative practices globally.

We specialise in providing insights into Natural Capital. We use geospatial imagery and historical soil values about specific land assets to provide indicators of soil health, hydrological features, carbon, biodiversity and nutrients using our proprietary data model. We provide scenario planning capabilities and alerts and continuously develop our model and data coverage to include further Natural Capital variables. Our customers include banks, investors, companies with large agricultural footprints (e.g. food), and policy makers.

The team offers a dynamic start-up culture, working from home. We work out of the UK, Australia and Africa and we all speak English. We have a few early morning calls during the week due to time-zones however apart from this we are relatively flexible on working hours. We think it is critical to ensure that our employees maintain a healthy work life balance whilst working on a project that motivates and is exciting to them.

Reporting into the CTO (James Nurse), you will be a good communicator and comfortable collaborating with the project team operating in an agile environment. You will understand the value of well architected and implemented infrastructure, continuous integration and how a company can host a solution in a fiscally responsible and scalable manner.

This is a rapidly evolving space where there are plenty of opportunities to learn and develop your skills.

Essential Qualifications

A MPhil or PhD in a subject related to this post and demonstrated capabilities in diverse modelling methods and analysis.

EXPERIENCE

Essential:

- Familiarity with the construction and use of biophysical and hydrological models
- Experience in integrated ecological systems modelling
- Experience in the development and application of spatio-temporal nonlinear numerical models to simulate ecosystem dynamics under differing climate conditions
- Experience in the processing and analysis of spatio-temporal data
- Record of scientific writing preferably in the peer-reviewed literature
- Experience in working as part of team

Desirable:

- Experience working with multiple sources of data and information with high degrees of uncertainty
- Experience in artificial intelligence and knowledge graphs
- Software development ability

KNOWLEDGE

Essential:

- Broad knowledge of soil, biophysical, hydrological, and socio-economic, processes, and their representation in mathematical models

Desirable:

- Knowledge of systems modelling software (e.g. Stella, Vensim, Matlab)

PERSONAL QUALITIES

Essential:

- Ability to engage with specialists in other disciplines
- Approachable

Position: Full-time continuing

Salary: £45 - 75K/yr, depending on experience

Expression of interest: Please let us know if you are interested in applying for this role before April 5th.

Contact: info@downforce.tech

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