Position Description – Research Associate in Environmental Time-Series Modelling

Updated 19 February 2025

POSITION DETAILS

College	**College of Science and Engineering**
Organisational Unit	**Ecology, Evolution, and Environment**
Supervisor	**Matthew Flinders Professor of Global Ecology**
Classification	**Research (Academic) Level A**
Employment Type	**Fixed-term, full-time**

POSITION SUMMARY

The Research Associate will work with various Nodes of the Australian Research Council Centre of Excellence for Indigenous and Environmental Histories and Futures (CIEHF.au) to analyse time series of palaeo and modern proxies of environmental, ecological, and archaeological change, with particular focus on shifting environmental and human trends occurring in Australia over the last 1000 years. The Research Associate will apply existing code and develop new approaches to analyse complex data derived from lake, lagoon, river, and wetland cores measuring various aspects of dated vegetation composition, fire regime, and climate fluctuation. The Research Associate will also develop simulation models to assess the behaviour of different proxies under various environmental constraints to assist in the interpretation of the outputs of time-series models.

UNIVERSITY EXPECTATIONS AND VALUES

All staff at Flinders are responsible for understanding their obligations and responsibilities as set out in the University's code of conduct and are expected to:

- demonstrate commitment to the University's values of Integrity, Courage, Innovation, Excellence and the underlying ethos of being Student Centred;
- contribute to the efficient and effective functioning of the team or work unit to meet the University's objectives. This includes demonstrating appropriate and professional workplace behaviours, providing assistance to team members if required and undertaking other key responsibilities or activities as directed by one's supervisor;
- promote and support an inclusive workplace culture which values diversity and embraces the principles of equal opportunity;
- perform their responsibilities in a manner which reflects and responds to continuous improvement; and
- familiarise themselves and comply with the University's Work Health and Safety, Injury Management and Equal Opportunity policies.

KEY POSITION RESPONSIBILITIES

The Research Associate in Environmental Time-Series Modelling is accountable for:

- Collaborating with Indigenous people, palaeo-ecologists, climatologists, and archaeologists, government agencies, and other relevant people for co-development of relevant analyses and data access;

- Building computer code to model the signals inherent in complex and at times uncertain data derived principally from water-body cores measuring environmental change;

- Develop both spatial and aspatial approaches to determine the relationship between different proxies of environmental and cultural change;

- Develop simulation approaches to determine the behaviour of proxy phenomena for interpreting long-term environmental and human cultural changes;

- Contributing to the research project by working collaboratively with the research team to deliver key project milestones;

- Contributing to and participating in training, exchange, co-design, and other events provided by the ARC Centre of Excellence for Indigenous and Environmental Histories and Futures (CIEHF.au);

- Contributing to the planning and execution of research by offering new and innovative ideas, reviewing relevant literature and other sources of information, actively participating in the production of data, contributing to the writing and editing of grant and ethics applications and attending seminars, meetings, and conferences;

- Contributing to ethical, high-quality, and innovative research and evaluation through activities such as scholarship, publishing in recognised, high-quality journals and assisting the preparation and submission of bids for external research funding; and

- Assisting principal supervisors with supervision of Honours and postgraduate research projects.

- Some out of hours work (including weekends) as well as rural SA, interstate and overseas travel, may be required.

- Any other responsibilities in line with the level of the position as assigned by the Supervisor and/or the University.

A National Police Certificate which is satisfactory to the University will be required by Flinders University before the successful applicant can commence in this position.

KEY POSITION CAPABILITIES

- Completion of a PhD in an associated environmental and/or archaeological field [required].
- Evidence of previous coding experience and model development for the analysis of data [desirable].
- Capacity to develop computer code to model the environmental and cultural proxies provided by the team [desirable].
- Experience working with Indigenous organisations [desirable].
- Direct experience working with Aboriginal and/or Torres Strait Islander communities [desirable].
- Demonstrated research experience in terms of publications in high-quality journals, attraction of external competitive grants, and presentations at a national and/or international level [required].
- Well-developed interpersonal skills [required]:
  - excellent communication skills in an academic environment,
  - time management to ensure projects are delivered on time, and
  - the ability to build and develop effective relationships and to collaborate with a range of stakeholders.

THE 2025 AGENDA

- Experience working with longitudinal palaeo-proxy datasets and/or climate datasets [desirable].
- Previous supervision of postgraduate students [desirable].