• Do you have a strong interest in spatio-temporal data assimilation?
• Prestigious Postdoctoral Fellowship on offer - kick-start your research career
• Join CSIRO's Data61 - Australia's largest data innovation group

The Position

Postdoctoral Fellowships at CSIRO provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.

Postdoctoral Fellows are appointed for up to three years or part time equivalent and will work closely with a leading Research Scientist or Engineer in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.

CSIRO’s Data61 has an exciting opportunity for a statistician, data scientist or a mathematical modeller with a strong interest in spatio-temporal data assimilation to work at the interface with the agro-environmental sciences. This role will develop novel analytical methods for assimilating field observation data into biophysical models to improve the predictions of spatio-temporal dynamics. There will be a need to overcome challenges of model initialisation, prediction bias, reconciling observation and model output that may be in conflict, and approaches to model learning and updating.

We are seeking an individual with expertise in modelling spatial-temporal data, data assimilation or model-data fusion techniques. Cutting edge machine learning approaches such as deep learning may be relevant. The individual will be familiar with managing and manipulating diverse data sources, sizes and types.

While being able to work with autonomy, you will be expected to contribute solutions to research problems that are appropriate and innovative as part of the team, communicate findings through reports and publications in top forums, and engage closely with the wider research community.

You will work closely with the immediate inter-disciplinary research team, including statisticians, ecological modellers and software engineers. You will also have access to a broad pool of talent with which to collaborate to achieve exciting results.

The position will involve travel within Australia and to international conferences. CSIRO will support flexible working arrangements where required.

Location: Brisbane, QLD or Canberra, ACT
Salary: AU $80K - AU $91K plus up to 15.4% superannuation
Tenure: Specified Term of 3 years
Reference: 57200

To be successful you will need:
• A doctorate (or masters with equivalent skills and experience) in applied mathematics or a relevant discipline such as data science. **Please note:** To be eligible for this role you must have **no more than 3 years** of relevant postdoctoral experience.

• Demonstrated skills in the analysis of spatial and spatio-temporal data including Bayesian models (e.g. hierarchical modelling, sampling methods) including assimilating data of different types, scales and distributional properties

• Demonstrated knowledge of uncertainty analysis techniques, including statistical emulators, applied to deterministic or physical models (particularly environmental and agricultural models).

• High level computational and programming skills (e.g. R, Python, BUGS, JAGS, STAN, C++ or equivalent) to undertake customized statistical data analyses and ability to implement optimisation algorithms.

• High level written and oral communication skills with the ability to present the research findings effectively internally and externally, including at national and international conferences, and through publishing in quality, peer reviewed journals.

• The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, plus the motivation and discipline to carry out autonomous research.

• An interest in ecological, biological and agricultural systems.

**Before applying, we encourage you to read the full position description for this role.**
This document can be viewed at:


**Position details document**

**Who we are:** The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

At CSIRO, we do the extraordinary every day. We innovate for tomorrow and help improve today - for our customers, all Australians and the world. We imagine. We collaborate. We innovate.

We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you. Find out more! [CSIRO Balance](https://www.csiro.au/)

**How to Apply:** To apply, please provide a CV as well as a cover letter addressing the selection criteria in brief, and upload these as one document. If your application proceeds to the next stage you may be asked to provide additional information.

**Applications Close:** Applications will close **10:59pm (AEST) on Thursday 21st June 2018.**