



Post-doctoral Fellowship

Design and implementation of a series of forest research experiments

THE RESEARCH PROJECT

South Africa has very few long-term, intensively monitored experiments in managed forest environments. Other countries with comparable climates and forest/plantation types (e.g. Brazil¹, Australia²) have a far more extensive infrastructure to support long-term, high quality forest research. A need exists to install this kind of infrastructure, suited to current future needs in society, which will be of broad benefit to the forest science community.

Towards developing a new series of such sites in South Africa, tentatively named the “Open Air Forest Laboratories”, this post-doctoral fellowship will involve the design of a forest research experiment that will provide fundamental infrastructure to support future forest research, with a particular focus on managed eucalypt plantation forests. In particular, the vision is to create an experiment in which the widest possible array of variables are continuously monitored at the highest possible and feasible spatial and temporal resolutions. This would include, therefore, the installation of a range of sensing equipment, the harnessing of remote sensing data and the planning of regular measurement campaigns, and associated data acquisition and management protocols. The design stage will include working closely with the principal investigator of the project and other role-players, including potentially arranging and coordinating one or more workshops. The fellowship will then also involve planning and managing the installation and set-up of the first of a series of sites in Stellenbosch in 2023.

The fellowship will be funded through the Hans Merensky Foundation “EucXylo” Research Chair (<http://blogs.sun.ac.za/eucxylo/>), based at the Department of Forest & Wood Science at Stellenbosch University. The program aims to understand and model processes of wood formation (xylogenesis) in eucalypts.

DUTIES

This post-doctoral fellowship will involve

1. The design of one or more possible forest research experiments.
2. Working closely with the principal investigator of the project and other role-players, including potentially arranging and coordinating one or more workshops.

¹ https://www.fs.fed.us/rm/pubs_other/rmrs_2010_stape_j001.pdf.

² <https://www.tern.org.au/tern-observatory/tern-ecosystem-processes/>

3. Planning and managing the installation and set-up of the first of a series of sites in Stellenbosch in 2022/2023.
4. Sourcing, calibrating, testing and installing monitoring equipment (with assistance from project technicians).
5. Networking to bring in potential users and stakeholders and working with/co-supervising post-graduate students whose projects will utilize the experiment/s.
6. Managing the existing project budget, including potentially sourcing additional funds.

LOCATION

The incumbent will be based at the Department of Forest & Wood Science (DFWS) at Stellenbosch University (SU). SU celebrated its centenary in 2018, is widely acknowledged as one of Africa's premier tertiary education and research institutions (visit www.sun.ac.za for more information). Staff and students at the University enjoy a relaxed and pleasant lifestyle, close to mountains and sea. Attracting students from around the world, and particularly Africa, and with strong international linkages and collaborations, the DFWS prides itself on research excellence with a diverse, friendly culture.

REQUIREMENTS AND QUALIFICATIONS

- A recognized Ph.D. in Forest Science, Ecology, Plant physiology or other related field within the last five years.
- Up-to-date knowledge in modern scientific data collection, data management, and data/statistical analysis.
- Excellent communication and interpersonal skills to be able to interact effectively with a diverse group of scientists and stakeholders.
- A high level of written and verbal communication skills in English are essential.
- Ability to function in a multicultural and multilingual environment, ability to work well both independently and as part of a team and take initiative.

RECOMMENDATIONS

- At least two high quality papers already published in the scientific literature.
- Knowledge of the R system for statistical computing or other programming languages.
- Familiarity with electronic data-logging and sensing equipment, including systems and hardware like Campbell Scientific.
- Working knowledge of electronics.

CONTRACT DURATION AND COMMENCEMENT

The research stipend is granted for a one-year period which can be extended to a second year, performance dependent. The base stipend is R340,000 per annum (top-ups are permitted from other sources to a maximum of R400,000). Although the stipend is fully covered by the project, the successful incumbent will be encouraged to apply for additional funding to expand the scope of the research.

Please note that post-doctoral fellows are not appointed as employees in South Africa and their fellowships are awarded tax free, but they are not eligible for standard employee benefits. For more information about post-doctoral fellowships at Stellenbosch visit <http://www.sun.ac.za/english/research-innovation/Research-Development/postdocs>.

This position is based at Stellenbosch campus.

Commencement: **As soon as possible**

APPLICATION PROCEDURE

Application closing date: **Until position is filled**

Please send by email to Dr. David Drew (drew@sun.ac.za) the following documents:

1. A brief cover letter providing motivation for your application.
2. A brief essay (max one page) in which you explore the scientific opportunities that you see from long-term, intensive monitoring of managed forests.
3. Current, comprehensive CV with full publication list.
4. Copies of doctoral degree certificate and other relevant degree certificates and grades obtained (where applicable).
5. Contact details of at least two professional referees.

Any questions about the position can be addressed to Dr. Drew at the same email address. For questions about visas and international relocation to South Africa please contact Ms. Izel Rossouw (izel@sun.ac.za).

Applicants who have not received a response within 14 days of having sent in their application, please accept that your application has not been successful. Short-listed applicants will be contacted to arrange an interview. These candidates may be requested to provide additional information/submissions, and to undergo certain biometric/literacy/other tests.