

PhD position in forest ecophysiology

Southern Swedish Forest Research Centre

A PhD position is available at SLU's Southern Swedish Forest Research Centre in Alnarp. We are a dynamic, international and growing department with scientists conducting research in silviculture, ecology, forest pathology, policy and planning. The position is bridging fundamental scientific knowledge on tree ecophysiology, with current and future silvicultural practices.

Read more about our benefits and what it is like to work at SLU at <https://www.slu.se/en/about-slu/work-at-slu/>

WIFORCE Research School

Do you want to contribute to the future sustainable use of forests? Apply to join WIFORCE Research School! Biodiversity and the role of forests in climate change are now key social issues that require more knowledge. In order to both sustainably use and safeguard forest biodiversity, a coherent basic science research program is needed that addresses large and complex issues and develops new analytical tools. That's why the WIFORCE Research School, part of the Wallenberg Initiatives in Forest Research (www.slu.se/en/wiforce), was created.

Effects of long-term elevated soil fertility to drought tolerance and resilience of Swedish forest

Research area: forest ecophysiology

Description:

After almost doubling the growth rate of Swedish forests since the 1920s through precise forest management, the last decade has shown an abrupt reduction in forest growth in Sweden. Increasing frequency and intensity of droughts limit tree growth and health, while the interaction with other factors that potentially predispose causes of tree decline are poorly understood. For example, elevated soil fertility can increase biomass production in nutrient poor conditions, but may also predispose trees to a less drought-resistant posture and physiology.

The project aims to reconstruct, measure and predict the sensitivity and resilience of Swedish conifer forests to interacting soil fertility and droughts. Specifically, we want to detect whether long-term fertilization practices have modified the drought-sensitivity of trees. We will analyze long-term growth trends and tree physiological indicators to detect acclimation and stress responses. Carbon, water and nutrient dynamics in trees are central in this project.

As successful candidate, you will investigate predisposition of trees to drought stress by long-term fertilization, both experimentally and with modelling. You will analyze long-term growth trends using tree cores from field sites along a climatic gradient, and study physiological and morphological acclimation of trees in controlled climate-chamber settings. You will also collaborate in a unique field manipulation setup with colleagues at the SLU campus in Umeå, combining fertilization history with early snow-melt in mature trees. Your work will be guided by experienced researchers in your advisory group. In addition, this PhD project is embedded in the WIFORCE research school, part of the Wallenberg Initiatives in Forest Research, offering a unique combination of education, training and networking opportunities.

Qualifications:

We are looking for a motivated candidate with a strong interest in tree ecophysiology. At time of employment, the successful candidate should have:

- A completed M.Sc. in plant physiology, biology, forest management or equivalent.
- Sound knowledge of tree ecophysiology and an interest in silviculture.
- Good written and spoken English skills.
- A category B driver's license for fieldwork.

Beneficial qualifications are

- Experience in tree physiological measurements.
- Experience in fieldwork.
- Experience in programming / modeling in R and/or other software.

Particular emphasis will be placed on your personal skills as team player as well as your ability to take initiatives and work independently.

Click the "Apply" button to submit your application. Your application needs to contain the following attachments: 1) curriculum vitae,

including two listed references with email addresses, 2) link to, or copy of master thesis, 3) a written motivation or reflection, in English.

Place of work:

Alnarp

Forms for funding or employment:

Employment as PhD student (4 years)

Starting date:

According to agreement.

Application:

Click the “Apply” button to submit your application. The deadline is 2026-02-10

To qualify for third-cycle (Doctoral) courses and study programmes, you must have a second-cycle (Master’s) qualification. Alternatively, you must have conducted a minimum of four years of full-time study, of which a minimum of one year at second-cycle level.

Applicants will be selected based on their written application and CV, degree project, copies of their degree certificate and transcript of records from previous first and second-cycle studies at a university or higher education institution, two personal references, and knowledge of English. More information about the English language requirements can be found here: <https://www.slu.se/en/education/programmes-courses/doctoral-studies/application-admission-doctoral-studies/>

Please note that applicants invited to interview must submit attested copies of their degree certificate, or equivalent, a transcript of records from previous first and second-cycle studies at a university or higher education institution. Applicants who are not Swedish citizens need to submit an attested copy of their passport’s information page containing their photograph and personal details.

Read about the PhD education at SLU at <https://www.slu.se/en/study/programmes-courses/doctoral-education/>

Academic union representatives:

<https://internt.slu.se/en/my-employment/employee-associations/kontaktpersoner-vid-rekrytering/>

The Swedish University of Agricultural Sciences (SLU) has a key role in the development for sustainable life, based on science and education. Through our focus on the interaction between humans, animals and ecosystems and the responsible use of natural resources, we contribute to sustainable societal development and good living conditions on our planet. Our main campuses are located in Alnarp, Umeå and Uppsala, however, the university also operates at research stations, experimental forests and teaching sites throughout Sweden. SLU has around 4,000 employees, 6,000 students and doctoral students and a turnover of over SEK 4,5 billion. We are investing in attractive environments on all of our campuses. We strive to provide a work environment characterised by inclusivity and gender equality, where different experiences generate conversations between people and pave the way for science, creativity and development. Therefore, we welcome applications from people with diverse backgrounds and perspectives.

Kontaktperson:

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