The Department of Ecology and Environmental Science (EMG), Umeå Plant Science Center (UPSC) and the Swedish Forest Research Institute (Skogforsk) jointly open a 5-year PhD position within the industrial graduate student research school in forest genetics and biotechnology at UPSC. Application deadline is 10th March, 2017.

**Project description**
The future supply of biomass will come mostly from planted forests. In Sweden, almost all the regeneration material used in pine and spruce reforestation are supplied by tree breeding programs and seed orchards. It is thus critical that seed orchards function well, producing high seed yield and breeding gain but also a genetic base to support increased biomass production and resilience to future conditions. This project investigates: 1) how seed orchard design and management practices affect the genetic composition and diversity of seed crops; and 2) how seed orchard establishment and seed deployment strategy affect pine and spruce forests’ adaptation and productivity in their northern range.

This project is in close collaboration with Skogforsk. The position is for 5 years and defined as 80% research time at EMG, Umeå University, and 20% at Skogforsk.

**Qualifications**
We seek a candidate with academic background in population genetics, forest genetics and breeding, or molecular ecology. Knowledge of genetic data analyses, bioinformatics, and experience of high-throughput sequencing techniques are strong merits. The candidate should be highly motivated, independent and collaborative, and have a very good command in both oral and written English. The position includes interactions with the Swedish forestry sector.

Prerequisites for PhD studies include 240 ECTS credits of higher education studies of which 60 ECTS credits should be on an advanced level (Master level), or an equivalent qualification from abroad. This position specifically requires 120 ECTS credits in a subject relevant for ecology and a degree project of at least 15 ECTS credits.

**Evaluation and application**
Evaluation will be based on the individual letter, quality and relevance of master program and publication, the interview, and the candidate’s performance in a literature essay given after the interview.

The application should include:

- A short letter (max 2 pages) describing your research interests and why you are interested in the position
- CV, including academic achievements
- Digital copies of Bachelor/Master thesis
- Publications
- Certificates from higher education and other documentation that supports your application
- Contact information to three reference persons.

Your application must be registered in Umeå University’s e-recruitment system MyNetwork Pro (at http://www.umu.se/om-universitetet/lediga-jobb/) no later than 10th March 2017.

**Other information**
The principle supervisors to this project are Prof. Xiao-Ru Wang (xiao-ru.wang@umu.se) from EMG, and Prof. Bengt Andersson Gull (bengt.andersssongull@skogforsk.se) from Skogforsk.

Salary: According to agreements for PhD students at Umeå University.
**Skogforsk** is funded by the forest industry and the state. The demand-driven applied research includes a wide variety of fields, such as forest technology, raw-material utilization, environmental impact and conservation, forest tree breeding, logistics, forest bioenergy and silviculture. The institute has about 120 employees, of which 80 are researchers. ([www.skogforsk.se](http://www.skogforsk.se))

**Type of employment**  
Temporary position longer than 6 months

**Extent of employment**  
100%

**Salary**  
Monthly salary

**Contact**  
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**Union representative**  
SACO  
Tel: 090-786 53 65  
SEKO  
Tel: 090-786 52 96  
ST  
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**First day of employment**  
Spring 2017, according to agreement