Department of Soil and Environment in Skara

1 PhD student in the research education subject: Soil Science

Crop production recommendations for precision agriculture from smart decision support systems

Over the coming decades sustainable intensification is a prerequisite for increased food production and food security, it is expected that decision support systems (DSS) based on geodatabases and sensors will play a central role. Recently developed DSS such as CropSAT.se (based on satellite data), Markdata.se (based on a soil database), and Solvi.nu (based on data from drones) are now widely adopted in Swedish crop production. Currently, advice and recommendations to Swedish farmers are based on traditional field trials. In order to take full advantage of new technology for precision agriculture in crop prodution, it is necessary to combine knowledge from trials with spatial data in geodatabases or from remote or proximal sensing, and transform this into spatially explicit management recommendations. In this project we will focus on methods and strategies to derive recommendation maps by integrating available data with known biological relationships, for example to optimize nitrogen rates across agricultural fields, in order to reach qualitative and quantitative production goals. The project is part of a newly formed research programme: Laboratory for intelligent agricultural decision support systems (LADS) aiming at development of efficient decision support for the future agriculture.

Qualifications

We are seeking a highly motivated and enthusiastic candidate with a bachelor or master's degree in soil science, or in a field judged equivalent. The candidate must be interested in crop production both from a practical and scientific perspective. It is important with an interest in data management and new technology. Experience in geographic information systems, remote sensing, statistics, programming, and the R package is an advantage. Proficiency in English is a requirement. High weight is given to personal abilities such as capability of working both independently and in collaboration within groups.

Forms for funding or employment
Employment as PhD student

SLU is an Equal Opportunity Employer.

A person has basic eligibility for third cycle education if he or she has taken a second cycle qualification or has completed course requirements of at least 240 higher education credits, including at least 60 higher education credits at second cycle education. Upper secondary school grades equivalent to English B/English 6 are a basic requirement.

Selection among applicants meeting the requirements is made with reference to written application including curriculum vitae, copies of degrees and transcripts of academic records, one copy of the dissertation for masters or undergraduate degree, a list of at least two references familiar with the applicant's qualifications, certified knowledge of the English language and an interview.

Read about the PhD education at SLU at www.slu.se/en/phd

Use this APPLICATION FORM

Further information:
Docent Kristin Piikki, kristin.piiki@slu.se,
Assoc. prof Mats Söderström (mats.soderstrom@slu.se)

Academic union representatives
SACO Annelie Carlsson +46 (0)511-67293
SEKO Linda Thörnström +46 (0)18 67 10 57
ST Anne Larsen +46 (0)511-67208

Applications, marked with **ref no SLU ua 2017.2.5.1-4169**, must have arrived at the Registrar of SLU, P.O. Box 7070, SE-750 07 Uppsala or registrator@slu.se
no later than **2018-02-15**.