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Licentiate student in Soil Nutrient Cycling focusing on organic matter dynamics

The Department of Soil & Environment conducts research, environmental monitoring & assessment and higher education for sustainable soil management in agriculture, forestry and urban environments. Outcomes are aligned to and contribute towards national and international strategies on food security, national environmental objectives and climate reporting as well as the 2030 Agenda for Sustainable Development. The majority of the department's activities and employees are located in the Soil-Water-Environment building on the SLU Ultuna campus in Uppsala, and there is a research group and a field research station situated in Skara.

EJP SOIL EnergyLink

Description:

We are seeking a licentiate candidate for a research project evaluating whether aboveground plant trait diversity affects the metabolic response of soil microorganisms to carbon inputs. The licentiate project is part of a larger collaborative project (EJP SOIL – EnergyLink https://ejpsoil.eu/soil-research/energylink) that is based on the premise that aboveground plant trait diversity can be exploited to manage persistence of soil organic carbon. The licentiate student will specifically study the potential 'return on investment' that soil microbial communities can obtain from the consumption of plant-derived organic matter using a novel bioenergetics approach developed in the Department of Soil & Environment.

The metabolic response of soil microorganisms will be evaluated by using inter alia high resolution techniques, the molecular diversity and the energetic content of soluble organic matter (i.e. the most available organic material to microbial degraders). The licentiate candidate will join a dynamic and internationally recognized team working at the biogeochemical interface of soil organic matter dynamics. We are looking for an inquisitive person who is keen to participate in a research program that aims to improve our fundamental understanding of how plant trait diversity affects energy flows in soil and to improve management practices for enhanced carbon sequestration in soil.

Qualifications:

The applicant should have a Master's degree (or equivalent) in soil or environmental science, earth sciences, ecology, agronomy or similar. We are seeking a highly motivated candidate with a strong interest in integrative work at the chemical and biophysical interface in soils. Knowledge in soil biogeochemistry and/or soil biology with experience working in the laboratory are desirable. Understanding of soil organic matter models, experiences in planning and executing experiments and scientific writing skills will count as merits. The applicant should have the ability to work both independently and in a team. A proven good ability to communicate in written and spoken English is required.

Proficiency in English (both spoken and written) is required.

Evaluation will be based on the motivation letter, Master thesis and other publications. A selection of candidates will be interviewed, and if needed a written assay may follow.

Place of work:

Uppsala

Forms for employment:

Employment as a Licentiate, 2 years of education. (With possible opportunity for doctoral education, a total of 4 years of education)

Starting date:

1 July or according to agreement.

Application:

Click the "Apply" button to submit your application. The deadline is 2022-04-30.

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: www.slu.se/en/education/programmes-courses/doctoral-studies/new-doctoral-students/english-language-requirements/

Please note that applicants invited to interview must submit attested copies of their degree certificate, 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 www.slu.se/en/education/programmes-courses/doctoral-studies/

Academic union representatives:

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

The Swedish University of Agricultural Sciences (SLU) is a world-class international university with research, education and environmental assessment within the sciences for sustainable life. Its principal sites are in Alnarp, Umeå and Uppsala, but activities are also conducted at research stations, experimental parks and educational establishments throughout Sweden. We bring together people who have different perspectives, but they all have one and the same goal: to create the best conditions for a sustainable, thriving and better world. SLU has just over 3,000 employees, 5,000 students and a turnover of SEK 3 billion. The university has invested heavily in a modern, attractive environment on its campuses. www.slu.se

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