Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Post-Doctoral Research Fellow

Nutrient recovery from subsurface agricultural drains (NUTRECS)

Applications are sought for a post-doctoral position to work on a project titled "*Nutrient capture and recovery technology from subsurface agricultural drainage networks"* within the Environmental engineering research group at Trinity College Dublin (TCD).

Rural water management systems (RWMS's) including subsurface agricultural drains are often overlooked and non-obvious in water source protection studies. In Ireland alone, it is estimated that there is artificial subsurface drainage under 44% of all agricultural land, or under 29% of the total land area. International studies have shown that subsurface drains located in rural headwater catchments can account for a significant percentage of both watershed discharge and major nutrient [(nitrogen (N) & phosphorus (P)] export impacting water quality downstream. Previous studies have illustrated that nutrient concentrations and loads from subsurface agricultural field drains in some Irish catchments are significant. The focus of this project is the development of cost-effective technologies to concurrently reduce and recovery excess nutrients from subsurface drainage waters for water quality protection.

This project provides a unique opportunity for a post-doctoral researcher to pursue interdisciplinary research and broaden their career in the thriving intellectual community at Trinity College Dublin. Based in the School of Engineering, the Post-doctoral student will work closely with the other researchers within the research group. The successful applicant would be expected to work 8 hours per day, 5 days per week with the possibility of out of hours work occasionally. The Salary is €55000.

NUTRECS is an interdisciplinary project that explores and develops technologies for nutrient capture and recovery from subsurface drainage networks.

The start date for this position is 1st October 2023.

Applications

Applications should be submitted within a single PDF document that includes a CV with educational history, transcripts of degree results, a short (1-2 page) letter of motivation and contact details for 2 referees. The motivation letter should clearly state how the applicant's research interests and skills relate to the research project outlined above. Applications will not be considered complete until referees have submitted their references. If the successful candidate does not have English as a first language, they will also be required to submit evidence of English language competence at this stage.

Trinity College Dublin is committed to policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community. On that basis we encourage and welcome talented people from all backgrounds to join our staff and student body. Trinity's Diversity Statement can be viewed in full at https://www.tcd.ie/diversity-inclusion/diversity-statement.

We are looking for applicants with the following qualifications:

Essential:
• A first-class (or equivalent) or 2:1 hons undergraduate degree in Environmental or Process Engineering/Science or another discipline directly relevant to the topic.
• A PhD in Environmental, Chemical or Process engineering. Strong Chemistry and/or Material science skills.
• Strong skills in Environmental chemistry and the Water treatment laboratory including bench scale and pilot scale studies.
• Ability to work and drive to field locations (ability to drive in Ireland, and/or complete license exam by start of post-doctoral position).
• Excellent communicative competence in English
• Excellent research and organisational skills
• Be a self-directed individual with initiative and able to work in a collaborative, structured environment

Desirable:
• Demonstrable experience of pursuing water research, familiarity with water analysis, wastewater process design, laboratory and pilot scale systems, materials analysis techniques and a distinct openness towards interdisciplinary collaboration.
• Willingness to contribute to the activities of the School of Engineering.

Further enquiries:
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