University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Associate / Fellow in Soil and Plant Science	Job family and level	Research & Teaching Level 4 (Appointment will be Level 4 Career Training Grade where an appointment is made before PhD has been completed)
School/ Department	Biosciences Agricultural and Environmental Sciences	Location	Sutton Bonington Campus

Purpose of role

Research to support a new project called 'RESTRUCTURE' which is funded by Syngenta. This is a collaboration between Syngenta, Rothamsted Research and the University of Nottingham (UoN). The overarching aim of the project is to quantify differences in soil structures between samples prepared in the laboratory and those that exist in the field, and how this impacts upon the subsequent transport of agrochemical particles. Utilising X-ray Computed Tomography (CT) you will measure the pore networks inside soil columns, perform accompanying soil hydraulic tests and provide data for the modelling of agrochemical transport in soils. The project will involve active collaboration with soil physicists, chemists and modellers at all partners including the world-leading Hounsfield facility for X-ray CT of soil-plant systems at Sutton Bonington.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	Plan and conduct research into the effects of soil structural dynamics on the transport of particles in agrochemical compounds ▪ day-to-day responsibility for the conduct and satisfactory progress of the research, including X-ray imaging (full training given), image processing and soil hydraulic assessment ▪ manage and contribute to the establishment and running of the cohort of experiments over the duration of the project ▪ keep meticulous records, analyse and interpret data, prepare synthetic reports and bring insights to the research as it develops and progresses ▪ communicate and interact with external collaborators on the project to ensure effective integration between the other components of the programme ▪ work safely and responsibly with regard to School rules	75
2	Write up results and present internally and externally as appropriate, reporting the research findings and outcomes as the project develops, including conference presentations and drafting manuscripts for peer-reviewed journals	15
3	Assist with organisation and running of, and contribute to, periodic project meetings and those with stakeholders.	5
4	Undertake wider activities to ensure effective personal career development	5

Person specification

	Essential	Desirable
Skills	These should be cognate with experimental environmental science. ▪ Evidence of sufficient breadth or depth of research methodologies and techniques to work effectively in research area. ▪ High degree of competence in planning, executing and delivering controlled experimental systems. ▪ Demonstrable ability to analyse, synthesise and communicate results. ▪ Excellent oral and written communication skills including ability to communicate complex information clearly both orally and in writing. ▪ Ability to work effectively as part of a team and independently as required	▪ Ability to assess and organise resource requirements and deploy effectively. ▪ Statistical analysis of environmental data, and an appreciation of statistical modelling approaches in the environmental sciences.
Knowledge and experience	▪ Controlled experimental approaches to soil/environmental science ▪ Laboratory-based measurements of soil properties. ▪ Publication record commensurate with career to date.	▪ X-ray computed tomography techniques ▪ Digital image analysis ▪ characterisation of soil structure ▪ pore scale modelling
Qualifications, certification and training (relevant to role)	▪ PhD, or close to completion of a PhD, in biological or environmental sciences area	

Athena SWAN Silver Award

The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
Taking ownership	Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
Forward thinking	Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
Professional pride	Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
Always inclusive	Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others

