

Researcher Job Details

Research Assistant/Associate in Molecular/Network Ecology School of Natural and Environmental Sciences Faculty of Science, Agriculture and Engineering

Research Role Profile

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As part of our commitment to career development for research staff, the University has developed 3 levels of [research role profiles](#). These profiles set out firstly the generic competences and responsibilities expected of role holders at each level and secondly the general qualifications and experiences needed for entry at a particular level.

Specific Responsibilities of Position

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1. Lead and perform molecular/network ecology research activities within the EU H2020 EcoStack project
2. Play a leading role in the validation and application of DNA-metabarcoding protocols to construct highly resolved farmland species-interaction networks
3. Combine Next Generation Sequencing (NGS) technologies, bioinformatics and network analysis to examine the direct and indirect interactions of pests, natural enemies and pollinators in crops and quantify their effects on yield
4. Liaise closely with Work Package partners across the EU in the development of image-based tools (combined with DNA metabarcoding) to track ecosystem service provider (ESP) dynamics
5. Develop rapid, field-based tools to assess and identify parasitism of crop insect pests for the benefit of growers
6. Liaise closely with the activities of EcoStack partners, providing additional support in NGS technologies where necessary
7. Evaluate NGS technology platforms, including Illumina and Oxford Nanopore, with regards to biomonitoring in the field
8. Contribute to funding applications and scientific publications
9. Play a full and active role in the coordination of the Network Ecology Group and activities within the wider Ecology Research Group at Newcastle University
10. Contribute to University science communication and public engagement activities

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Person Specification

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		Essential or Desirable
	Qualifications	
1	PhD (awarded or nearing completion) in molecular ecology, community ecology or a related field	Essential
	Knowledge, Skills and Experience	
1	Proven laboratory research experience in environmental DNA, DNA metabarcoding and bioinformatics	Essential
2	Expertise in Next Generation Sequencing platforms, such as Illumina and/or Oxford Nanopore	Essential
3	Theoretical understanding of network/food-web ecology	Essential
4	Experience of coding/computer programming using R and/or Python	Essential
5	Taxonomic identification skills, particularly agricultural plants and animals	Essential
6	Expertise in biostatistics	Essential
7	Understanding of field and lab risk assessment and associated protocols	Essential
8	Publication record in relevant high quality peer-reviewed scientific journals	Essential
9	Fieldwork experience in agro-ecology	Essential
10	Familiarity with high performance computing environments (e.g. HPC clusters, GPUs, Cloud resources)	Desirable
11	Familiarity with relevant funding landscape and grant application writing	Desirable
	Attributes/Behaviours	
1	Excellent written and oral communication skills	Essential
2	Available for national and international travel and occasional weekend working	Essential
3	Ability to work and communicate cross-culturally in an international team	Desirable
4	Ability to work under own supervision, sometimes in remote environments	Desirable

HR Office Use Only	
SAP Position Number:	
Grade:	F
Effective Date:	12/02/2019