



College Management Unit:	UCD College of Science
School Unit:	UCD School of Earth Sciences
Post Title & Subject Area:	UCD Research Fellow
Project:	Remote sensing of hydrothermal alteration in base metal mineralization basins.
Post Duration:	Specified purpose appointment (estimated duration: approx. 40 months)
Salary Range:	€66,548 - €70,467 Per Annum
Line Manager:	Professor Sarah Gleeson, Principal Investigator
Competition Ref. N°:	019584
HR Administrator:	Arianna Eady
For Applications and Closing Date:	https://www.ucd.ie/workatucd/jobs/
Eligible for Work Permit:	Yes

Position Summary:

We invite applications for a position of Research Fellow for a newly funded Research Ireland Research Professorship awarded to Prof. Sarah Gleeson in the School of Earth Sciences (UCD). The research programme is called “Metals for a Green Ireland: Developing innovative mineral systems and exploration tools” and is focussed on the provision of the critical and strategic raw materials required for the green transition, with a focus on sedimentary basins. The research group will initially comprise 13 members from senior research fellows to PhD students, involves field sites on three continents and collaboration with industry and other stakeholders.

This Research Fellow will lead a work-package focussed on Metals in the Critical Zone. The focus of this project will be on developing and applying remote sensing techniques for mineral mapping in key strategic basins, with a particular emphasis on the use of hyperspectral data e.g. EnMap. Along with developing their own research projects the Research Fellow will also train and collaborate with other members of the research group (and the wider School of Earth Sciences) where appropriate.

The purpose of the role is to deliver a specific research project. The role allows the Research Fellow the professional development opportunity to demonstrate the capacity for independent and self-directed research and scholarship and the management of a research team. The role allows the Fellow to assemble a portfolio of independent achievement and render themselves competitive for tenured academic positions or senior scientific roles in industry.

In addition to the Principal Duties and Responsibilities listed below, the successful candidate will also carry out the following duties specific to this project:

- Identify appropriate study areas and acquire open-source hyper- and multi-spectral remote sensing data.
- Develop and apply a range of data processing, statistical and physics-based techniques to multi- and hyper-spectral data to generate mineral maps.
- Apply and further develop machine-learning and statistical models (e.g. PCA, SAM, clustering, neural networks) for spectral interpretation, segmentation, and mineral identification.
- Work with other team members to integrate remote sensing data and products with other datasets e.g. geochemical, geophysical, petrophysical data and 3D models.

- Carry out ground truthing or mineralogical studies to improve or inform hyperspectral data processing where appropriate.
- Create effective visualizations for data products.
- Develop and produce of scientific publications and programme outputs.
- Engage with other academic researchers, funders, industry and government officials.

Principal Duties and Responsibilities:

- Manage and conduct a specific programme of research and scholarship as part of the research programme described above.
- Disseminate the outcomes of this research and scholarship including peer-reviewed academic publications of international standing.
- Take a leading role in the further development of the research programme and in seeking and pursuing appropriate external funding.
- Participate fully in the wider research and scholarly activities of the School, Institute and University.
- Where appointed to do so by the University, supervise graduate research students as co-supervisor.
- Mentor and assist students and early-stage researchers in your group, School and Institute.
- Take responsibility for, manage and conduct administrative and management tasks associated with your programme of research.
- Engage in appropriate training and professional development opportunities as required by your School or Institute, or the University and where applicable your Principal Investigator.
- Engage in teaching and teaching support as assigned by your Head of School under the direction of a tenured member of the academic staff.

Particular to this position:

- The successful candidate will be offered a 'specified purpose' based contract aligned to the Research Project outlined above. Estimated duration: Approx. 40 months.

Salary Range €66,548 - €70,467 Per Annum

Appointment on the above range will be dependent on qualifications and experience.

Details on eligibility to compete and pension information is available at:

<https://www.ucd.ie/hr/resourcing/eligibilitytocompete/>

About University College Dublin

University College Dublin (UCD) is one of Europe's leading research-intensive universities and Ireland's largest universities, with a vibrant community of over 39,000 students and 4,000 staff from more than 152 countries. UCD combines a rich academic heritage with a global outlook, fostering innovation, creativity, and excellence across teaching, research, and public engagement.

Situated on a beautiful, parkland campus at Belfield, UCD offers a dynamic and inclusive environment where ideas flourish and collaboration thrive. As a world top 1% university, UCD is recognised for its impact on society - from groundbreaking research and sustainable innovation to nurturing future leaders across all disciplines.

Joining UCD means becoming part of a community that values excellence, integrity, diversity, and collaboration. Staff enjoy exceptional professional development opportunities, a supportive and flexible working culture, and the chance to contribute to meaningful work that shapes the future locally and globally.

UCD is committed to creating an inclusive environment where diversity is celebrated and everyone is afforded equality of opportunity. We welcome applications from applicants from all backgrounds, including those who identify with any of the protected characteristics that are set out in our Equality, Diversity and Inclusion policy. Learn more about Diversity at <https://www.ucd.ie/workatucd/diversity/>

Reasonable accommodations will be provided to any applicant during the interview process who discloses they have a disability or are neurodiverse.



Benefits of Working at University College Dublin

Working at University College Dublin offers a wide range of benefits designed to support staff wellbeing, professional growth, and work-life balance. Employees enjoy flexible and family-friendly working arrangements, including hybrid work options, job sharing, and generous leave policies. UCD provides a strong pension scheme, income protection, and travel-related savings such as tax-efficient commuter and cycle-to-work plans. Staff have access to professional development opportunities through LinkedIn Learning, study leave, and structured career progression frameworks. The university fosters an inclusive and supportive community, offering wellbeing programs and employee assistance services, while the Belfield campus provides excellent facilities, discounts, and sports amenities. Overall, UCD promotes a positive, balanced, and development-focused working environment.

More details can be found here: [Benefits - Work at UCD](#)

Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

Mandatory:

- Ph.D. in geosciences, geomatics, engineering.
- A demonstrated track record in the application of remote sensing data e.g. Aster, Sentinel-2 or spaceborne hyperspectral data e.g. EnMap or PRISMA to solid Earth Science applications.
- Experience working in the mineral exploration industry and/or co-designing research projects with industry partners.
- Strong background in data processing, image/signal analysis, data quality assurance/quality control and machine learning.
- Proficiency in Python, R or similar environments for handling large imaging spectroscopy or hyperspectral datasets.
- Building a wide variety of predictive models, applying them to different problems, and evaluating and interpreting the results.
- Track record of high-quality publications and/or innovation outputs, in accord with the norms of their discipline.
- Typically, a minimum of 4 years postdoctoral experience, ideally including an international element and/or enterprise experience.

- Demonstrable track record in the following areas:
 - Publications, as assessed by the norms of their discipline i.e. quality and impact of academic publisher, citations, ranking of journal publications etc.
 - Supervision of students, including, where appropriate contributing to undergraduate project supervision and Master's Dissertations on taught programmes.
 - Research leadership in a research group or laboratory.
 - Contribution to the writing of research proposals which are submitted to peer-reviewed funding processes.
 - Capability to exercise independence in research, as evidenced by, for example, senior authorship/sole authorship of publications and invited presentations at conferences.
- Demonstrated contribution to management of single research project (reporting, financial management, purchasing etc).
- Proven ability to coordinate overall delivery of project objectives including interdependencies across work packages.
- Track record of communication research to a wide range of stake holders.
- Experience of devising new methodologies to solve complex research problems.
- Candidates must demonstrate how they can positively contribute to fostering an inclusive environment and a level of awareness of equality, diversity and inclusion.

Desirable:

- Attainment of independent funding through a competitive, peer-reviewed process.
- Innovation and commercialisation outputs, e.g. development of patents, prototypes.
- Industry collaboration or experience.
- Experience working with Government agencies, nationally or internationally.

Supplementary information:

The University:	https://www.ucd.ie/
UCD Strategy 2030: Breaking Boundaries:	https://strategy.ucd.ie/
UCD College of Science:	https://www.ucd.ie/science/
UCD School of Earth Sciences:	https://www.ucd.ie/earthsciences/
Equality Diversity and Inclusion at UCD:	https://www.ucd.ie/workatucd/diversity/
Moving to Ireland Guidelines:	https://www.ucd.ie/workatucd/locationculture/movingtoireland/

UCD offers a comprehensive **Research Careers Framework** in line with the Advisory Science Council Report '*Towards a Framework for Researcher Careers*'. This model provides a structured and supportive **Career and Skills Development** system designed to ensure that Post-docs in UCD are able to plan their careers and prepare for future opportunities in academia, industry or the public sector. For more information, please [click here](#)

Informal Enquiries ONLY to:

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