

University of St Andrews

School of Earth & Environmental Sciences

Research Technician – TG1321SB

Further Particulars for Applicants

The School of Earth & Environmental Sciences is home to 20 permanent academic faculty, a cohort of ca. 6 postdocs, 25 PhD students and a number of secretarial and technical support staff. Research topics span from the formation of terrestrial planets to the origin and evolution of life, modern climate change, and the exploration of natural resources.

Our analytical facilities include a Neptune MC-ICP-MS, a Sapphire MC-ICP-MS, a Nu I MC-ICP-MS, an Element ICP-MS, two MAT-253 IRMS, a Delta Plus XP IRMS with peripherals, a Trace 1310 ISQ GC-MS, and two class 100 clean rooms to process pg-level samples. Additional facilities include an ICS6000 ion chromatograph, an N₂O CRDS, a H₂O CRDS, 193-nm excimer and 213-nm Nd-YAG lasers, LA and solution triple quadrupole QQQ-ICP-MS (Agilent 8800, Agilent 8900), an XRF, 514nm Raman and NIR-ATR spectroscopy, and reflected and transmitted-light microscopes. Through the St Andrews Centre for Advanced Materials, we access TEM, X-, W- and Q-band ESR, XP and NMR spectroscopy plus multi-laser Raman micro-mapping.

We collaborate with the European Marine Biology Research Centre, Scottish Oceans Institute and Marine Alliance for Science and Technology for Scotland. Several members of staff, as well as their students and postdocs, are actively involved in the St Andrews Centre for Exoplanet Science. We also have competitive-based access to the UK's national laboratories including the Diamond synchrotron and NERC cosmogenic isotope, radiocarbon, isotope geoscience and ion microprobe facilities. The School is a member of the Iapetus NERC Doctoral Training Partnership.

Our undergraduate teaching centres on three accredited BSc Honours degrees: Geology, Environmental Earth Sciences and MGeol in Earth Science. We also run joint BSc Honours with Biology and Chemistry and one MSc course in Geochemistry. In the national League Tables of UK Geology/Earth Science degrees, the School consistently ranks in the top 5, and our graduates have some of the highest levels of employability across the University.

The job description for this role is attached below.

Job Description

Job Title: Research Technician	Working Hours: 36.25 hours per week
School/Unit: Earth & Environmental Sciences	Grade/Salary Range: Grade 6/ £37,099 – £44,263 per annum
Reporting to: Prof. Richard White	Reference No: TG1321SB
Job Family: Academic Research	Start Date: October 2024 or as soon as possible thereafter
	Interview date: 18-20. September 2024 (TBC)

Main Purpose of Role

The purpose of this role is to maintain, operate, trouble-shoot and repair analytical facilities with a principal focus on plasma source mass spectrometry labs of the school, which serve multiple research groups. The research technician will be required to support research activities of the PIs, postdoctoral researchers, students and external users.

Key Duties and Responsibilities

- Operate and maintain the Agilent 8800 and Element 2 ICP-MS and the Nu I MC-ICP-MS, including method optimization, trouble-shooting and supporting analyses for external and internal users; operate and maintain a laser ablation system
- Keep written protocols for sample preparation and instrument operation up to date.
- Standardise analytical protocols, and contribute to or lead new method development.
- Communicate with technical support from external companies when problems arise.
- Engage with, support and where applicable train other members of the research team on equipment who may need to use the new methodologies.
- Manage instrument access for both internal and external users.
- Monitor long-term analytical performance, to ensure data quality and long-term data fidelity
- Create requisitions and manage purchases of consumables for the laboratories
- Ensure compliance with health & safety guidelines
- Support routine maintenance and trouble-shooting of other analytical equipment, including two CRDS, three gas-source mass spectrometers with various sample introduction systems (ion chromatograph, elemental analyser, gas lines) and smaller standard laboratory equipment (photospectroscope, heaters, balance, centrifuge, gas lines, vacuum pumps).
- Contribute to or lead research publication and contribute to research proposals as needed.

Please note that this job description is not exhaustive, and the role holder may be required to undertake other relevant duties commensurate with the grading of the post. Activities may be subject to amendment over time as the role develops and/or priorities and requirements evolve.

Person Specification

This section details the attributes e.g. skills, knowledge/qualifications and competencies which are required in order to undertake the full remit of this post.

Attributes	Essential	Desirable	Means of Assessment (i.e. application form, interview, test, presentation etc)
Education & Qualifications <i>(technical, professional, academic qualifications and training required)</i>	Hold a PhD degree in a relevant subject	Hold a PhD degree in Geosciences	Application/certificates
Experience & Knowledge <i>(examples of specific experience and knowledge sought)</i>	<p>Experience in operating and maintaining ICP-MS instruments</p> <p>Knowledge of isotope geochemistry</p> <p>Experience in clean lab techniques and solution chemistry for sample preparation</p> <p>Experience with data reduction, management and optimizing data quality</p>	<p>Experience with laser ablation mass spectrometry</p> <p>Experience with constructing gas and/or vacuum lines</p> <p>Experience with trouble-shooting electronic equipment</p> <p>Demonstrated ability to produce high-quality research publications</p> <p>Project management experience.</p>	<p>Application/Interview</p> <p>Application/Interview</p> <p>Application/Interview</p> <p>Application/Interview</p>
Competencies & Skills <i>(e.g. effective communication skills, initiative, flexibility, leadership etc)</i>	<p>Effective communicator (orally and in writing)</p> <p>Collegiality/willingness to work in a collaborative environment.</p> <p>Ability to work autonomously and to be proactive in identifying and resolving issues</p> <p>Administrative and IT skills appropriate for the efficient and effective delivery of research.</p>	Experience in managing finances and handling purchase orders	<p>Application/Interview</p> <p>Interview</p> <p>Interview/References</p> <p>Interview/References</p>

	Well-developed time management skills with the ability to meet deadlines		Interview/References
Other Attributes/Abilities (if applicable)	Evidence of keeping up to date with new developments in the literature that are pertinent to analytical techniques.	Willingness to travel to appropriate workshop/conferences	Interview/References

Essential Criteria – requirements without which a candidate would not be able to undertake the full remit of the role. Applicants who have not clearly demonstrated in their application that they possess the essential requirements will normally be rejected at the short listing stage.

Desirable Criteria – requirements which would be useful for the candidate to hold. When short listing, these criteria will be considered when more than one applicant meets the essential requirements.

How to apply

We encourage applicants to apply online at www.vacancies.st-andrews.ac.uk/welcome.aspx.

If you have difficulties in completing the online application form, please call +44 (0)1334 461990 or contact vacancies@st-andrews.ac.uk for an application pack.

For all applications, please quote ref: TG1321SB

Other Information

Interviews will be held on 18-20 September 2024 (to be confirmed)

In accordance with the new immigration rules, it is with regret that this role does not meet the current suitability requirements set by the UKVI to enable sponsorship of migrant workers. The University encourages all interested candidates to apply regardless of nationality and all applications received are assessed against the essential and desirable criteria listed in the further particulars. The successful candidate will have to demonstrate their right to work in the UK prior to commencing employment and where required, obtain the right to work in the UK without relying on University sponsorship. Information on other visa options is available at <https://www.gov.uk/check-uk-visa> or by contacting our HR Immigration Team on hrimmigration@st-andrews.ac.uk.

Equality, diversity and inclusion are at the heart of the St Andrews experience. We strive to create a fair and inclusive culture demonstrated through our commitment to diversity awards (Athena Swan, Carer Positive, LGBT Charter and Race Charters). We celebrate diversity by promoting profiles of BAME, LGBTIQ+ staff and supporting networks including the Staff BAME Network; Staff with Disabilities Network; Staff LGBTIQ+ Network; and the Staff Parents & Carers Network. Full details available online: <https://www.st-andrews.ac.uk/hr/edi/>

The University of St Andrews is a charity registered in Scotland (No SC013532).

Obligations as an Employee

You have a duty to carry out your work in a safe manner in order not to endanger yourself or anyone else by your acts or omissions.

You are required to comply with the University health and safety policy as it relates to your work activities, and to take appropriate action in case of an emergency.

You are required to undertake the Information Security Essentials computer-based training course and adhere to its principles alongside related University Policy and Regulations.

You are required to undertake all mandatory training as deemed appropriate by the University for your role.

You are responsible for applying the University's equality and diversity policies and principles in your own area of responsibility and in your general conduct.

You have a responsibility to promote high levels of customer care within your own area of work/activities.

You should be adaptable to change and be willing to acquire new skills and knowledge as applicable to the needs of the role.

You may, with reasonable notice, be required to work within other Schools/Units within the University of St Andrews.

You have the responsibility to engage with the University's environmental sustainability strategy, committing the University to reach net-zero by 2035.

You are required to engage with the technology, systems and communication channels necessary for you to undertake your work and must update your personal details via HR Self Service whenever there is a change.

Employees with staff management responsibilities must familiarise themselves with appropriate policies.

Who Are We? St Andrews At a Glance

- The third oldest university in the English-speaking world.
- Ranked top UK university in the [Guardian University Guide 2024](#).
- Ranked number one in the UK in the [Times and Sunday Times Good University Guide 2024](#).
- Students at the University of St Andrews are more positive about their education than students at any other mainstream university in the [National Student Survey 2023](#).
- The University of St Andrews is Scotland's top university and one of the top four universities in the UK in [The Complete University Guide 2024](#).
- The University is top in the UK for Teaching Quality in the [Daily Mail University Guide 2024](#).
- Research-intensive, more than 88% of research carried out by the University of St Andrews is world-leading or internationally excellent (Research Excellence Framework 2021).
- Athena SWAN [Bronze Award holder](#)
- A [Strategy](#) founded on ambition to be World-Leading, Diverse, Global, Entrepreneurial and Sustainable all underpinned by a commitment to social responsibility.
- A community of 10,000 students and 3000 staff.
- Highly international – more than 30% of students and staff are from outwith the UK
- A non-campus university, closely integrated with the ancient town of St Andrews
- Top quality [sports](#), [music](#) and [nursery](#) facilities for staff and students

University of St Andrews

Founded in the 15th century, St Andrews is Scotland's first university and the third oldest in the English-speaking world. The University of St Andrews is one of Europe's most research-intensive seats of learning. It is one of the top-rated universities in Europe for research, teaching quality, and student satisfaction.

Today, under the leadership of Principal and Vice-Chancellor Professor Dame Sally Mapstone FRSE, the University's Strategy is to broaden its global influence, with a focus on diversity, building a culture of entrepreneurship, research excellence, and social responsibility.

St Andrews is committed to broadening digital education, enhancing the experience of our on-campus students, while bringing a St Andrews education to much wider global community.

From climate science and sustainable development to energy ethics and grass-roots level action across all the communities in which it operates, sustainability is at the heart of the University's Strategic vision. World-leading research on sustainability is taking place across the breadth of the University, with researchers addressing key questions on the defining issue of our generation.

The University has set an ambitious target of carbon net zero by 2035, ten years ahead of the Scottish Government's 2045 target.

St Andrews is ranked as the top university in the UK in *The Guardian Guide 2024*, and *The Times and Sunday Times University Guide 2024*. The *Complete University Guide 2024* ranks St Andrews as the top university in Scotland, and fourth in the UK.