Professor in Sustainable Energy Systems

Applicant Brief | July 2019
Contents

3  About Heriot-Watt University

5  Bicentennial Research Leaders

6  School of Energy, Geoscience, Infrastructure and Society

8  The International Centre for Island Technology

9  Role description

11 Person specification

12 Outline terms and conditions and How to apply
About Heriot-Watt University

Heriot-Watt is a forward-looking, research-focused international university, with world-leading expertise in science, engineering, business management, languages and design. Our mission is to create and exchange knowledge that benefits society. Since its foundation in 1821, Heriot-Watt has taken pride in supporting academically excellent research that delivers significant impact to industry and beyond. We have a strong track record of engagement with the private sector, other universities, professional institutions, and the general public.

At Heriot-Watt we put our community of students, staff and alumni at the heart of everything we do. Our distinctive strengths will continue to build a global University that pioneers innovation in education, research and enterprise.

Our Global Community

- We have five campuses across the world: Edinburgh, Scottish Borders, Orkney, Dubai and Malaysia
- We have 28,000 students studying with us at our campuses and online through distance learning
- This includes over 9,000 at our Scottish campuses, almost 3,500 at our Dubai campus and over 2,000 at our Malaysia campus
- We have some 13,000 students studying through via on-line learning or with learning partners
- We employ over 2,000 staff across all our campuses
- Around 30% of our on-campus students studying in Scotland are from outside the UK, making Heriot-Watt one of more internationally diverse

A Rich Heritage

- The eighth oldest higher education institution in the UK
- The Watt Club is oldest graduate club in the UK
- We have over 116,000 alumni worldwide in over 190 countries
A Research-led institution

- The Research Excellence Framework (REF) 2014 ranked Heriot-Watt 22nd in the UK, with 82% of our research as world-leading or internationally excellent
- We are 9th in the UK and 1st in Scotland for research impact
- Over 80% of our academic staff are currently engaged in research at internationally recognised levels

World-leading reputation

- We were the International University of the Year, according to the Times / Sunday Times Good University Guide 2018
- We are ranked 35th out of 131 UK universities in the Complete University Guide 2019
- Over 95% of our graduates are in employment or further study within six months of graduation

Our Values Led Approach

As a community of staff and students we share four values that underpin how we work together and how we reach decisions. As a University we recognise that robust, respectful challenge develops ideas and sharpens our thinking as we undertake research and deliver education. Our values reflect this approach. Our values remind us that we:

- **Inspire** curiosity to learn and find solutions that transform lives;
- **Collaborate** by working in partnership to shape the future whilst taking responsibility for our own actions;
- **Belong** to a diverse, inclusive and international community working together across boundaries and cultures;
- **Celebrate** excellence and take pride in the achievements of our students, staff and alumni.

We are committed to our staff’s well-being and development and we offer a wide range of opportunities supporting academic and personal development. For all staff who join in a senior role we offer a comprehensive Leadership Development programme centred on our Leadership Excellence Framework.
Bicentennial Research Leaders

One hundred research leaders who will transform the world

In 2021, Heriot-Watt University, The Times International University of the Year 2018, will celebrate its bicentenary as an institution known for the creation and exchange of knowledge for the benefit of society.

To celebrate this achievement we have set ourselves the target of recruiting one hundred outstanding research academics between 2018 and 2021.

These outstanding and highly qualified research leaders will strengthen and complement our existing world-class research; raising our capacity to undertake world-leading research and work in collaboration with international business and industry. They will help establish the future strategic direction of the University, enhancing our existing strengths and delivering world-leading research across our three international campus locations.

Successful applicants will have access to a truly global research community, world-class research facilities, and be part of a committed value led organisation that believes in inclusivity and opportunities for all.
School of Energy, Geoscience, Infrastructure and Society

The School of Energy, Geoscience, Infrastructure and Society is one of the UK’s leading institutions for multidisciplinary research and teaching in areas critical to economic, technical and social development and sustainability. We aim to attain excellence in the teaching of the core disciplines that contribute to a sustainable, resource and energy efficient society and are committed to undertaking high value, high impact research and knowledge transfer in topics of relevance to global challenges.

The School enjoys facilities consistent with its location in modern, purpose-built accommodation on the Edinburgh campus. The School is well equipped in respect of laboratories for materials, structures, engineering, building services and informatics research and teaching. Our research and teaching facilities in Dubai and Malaysia are contained within purpose-built campuses in Dubai Academic City and Putrajaya, respectively.

Teaching

The School’s undergraduate teaching on our Edinburgh campus covers civil and structural engineering, architectural engineering, construction project management, quantity surveying, geography, urban studies, interior design and the biology suite. On our Dubai campus we teach civil & structural engineering, architectural engineering, architecture, construction management, quantity surveying and interior design. On our Malaysia campus we teach civil engineering, construction project management, quantity surveying and petroleum engineering. We offer a high-quality educational experience underpinned by practical and laboratory teaching, and informed by contact with professional practice. Most of our degree programmes hold the appropriate accreditation from the relevant professional body. This educational philosophy ensures excellent employment prospects for all our graduates.

Programmes of postgraduate study are aligned to the expertise contained in each of our research institutes. Our postgraduate students therefore benefit from state-of-the-art knowledge in their chosen study area. You can find further information about the School's postgraduate programmes at https://www.hw.ac.uk/schools/energy-geoscience-infrastructure-society/postgraduate-programmes.htm

Research

The School is one of the leading research centres in the UK. It has sustained a high reputation for the international standing of its research.

Research within the School is organised into six Institutes: https://www.hw.ac.uk/schools/energy-geoscience-infrastructure-society/research.htm

- Institute for Infrastructure and Environment (IIE)
- Institute for Sustainable Building Design (ISBD)
- The Urban Institute (TUI)
- Institute for Social Policy, Housing, Equalities Research (I-SPHERE)
- Institute of Life and Earth Sciences (ILES)
- Institute of Petroleum Engineering (IPE)

All academic staff based on the Edinburgh and Dubai campuses contribute to the research activities of one of our Institutes.

These Institutes support a wide range of research activities of relevance to a sustainable, resource and energy efficient society. Institute staff undertake research funded by research councils of UKRI, the European Commission, industry, charitable foundations, local and national government.

Research outcomes are published in leading journals and conference of international standing and key findings are widely disseminated through other media and forms of output.
Institute for Sustainable Building Design

The Institute of Sustainable Building Design (ISBD) is recognised internationally for its excellence in: architectural and building systems engineering; construction informatics, construction management; and building and interior design. Our team conducts high-value, high-impact research and delivers innovative undergraduate and postgraduate training in a wide range of fields covering sustainability, design and management in the built environment. Particular areas of expertise include: building energy systems, acoustics, water and drainage, building simulation, low carbon innovations, construction informatics, building conservation, construction management, circular economy approaches, as well as innovation in built environment education. Our work aims to provide new insights into the current technical, social and management challenges facing the building industry.

Our research outcomes help with informing policy makers and providing the knowledge and tools required by building professionals.

ISBD is a leading member of the School’s Centre of Excellence in Sustainable Building Design that aims to develop and promote multi-disciplinary education for the sustainable built environment. We are also active members of the Edinburgh Knowledge Exchange Partnership, that is a strategic research alliance between Heriot-Watt University (EGIS) and the University of Edinburgh (ESALA). The alliance gathers over 60 researchers from Edinburgh’s two largest universities with a breath of expertise across architecture, landscape architecture, planning and the built environment. We undertake multi-disciplinary research to address complex challenges, and collaborate with the world beyond academia, including community groups, schools, industry, practitioners and all levels of government.

Further information can be obtained at: https://www.hw.ac.uk/schools/energy-geoscience-infrastructure-society/research/isbd.htm
The International Centre for Island Technology

The International Centre for Island Technology (ICIT) is a specialist arm of the School of Energy, Geoscience, Infrastructure and Society at Heriot-Watt University.

ICIT was established in Stromness, Orkney's second main town, in 1989. Based in the Old Academy Business Centre we enjoy panoramic views over the town, the sheltered harbour of Hamnavoe and towards the historic sheltered anchorage of Scapa Flow.

From the outset we have aspired to develop strong international links and collaboration. From leading and participating in major research projects on several continents to attracting students from across the world to our MSc courses - our reach continues to be global.

Our location provides an excellent opportunity for research into the decarbonisation of energy supply given the extensive ongoing investment in renewable energy resources on Orkney. Opportunities for applied and collaborative research are abundant because of the many local and international stakeholders actively pursuing the goal of full energy decarbonisation on the islands and beyond.
Professor in Sustainable Energy Systems
The Role

To celebrate our 2021 bicentenary of pioneering research we are seeking to appoint an outstanding full-time Professor in Sustainable Energy Systems in the School of Energy, Geoscience, Infrastructure and Society (EGiS) at Heriot-Watt University’s Orkney Campus. The post is co-funded by Heriot Watt University, Highlands and Islands Enterprise and Orkney Island Council. It will be based at the International Centre for Island Technology (ICIT) in Stromness, Orkney.

The post holder will be expected to build an internationally excellent research and teaching portfolio centred at ICIT. They will build upon recent successful research collaborations between Heriot-Watt University, energy stakeholders in Orkney and industrial partners with the aim of significantly increasing energy related research.

The successful applicant will hold a PhD degree in a science or engineering subject related to Energy Systems and will also have an established track record in energy research with a focus on the sustainability and decarbonisation of the energy system. A major component of the appointee’s research interests will be the adaptation of energy systems to better integrate intermittent generation to the built environment and the economy. This will be particularly relevant to the fields of intelligent energy systems, distributed storage, integration of electric vehicles and decarbonisation of energy supply.

The appointee will be an excellent communicator and be capable of building strong links with the community in Orkney and with stakeholders in the energy sector at a local, national and international level. They will be a team player with the ability to attract external funding, author high-quality academic publications, and develop, build and manage an interdisciplinary research team. They will also be expected to explore collaborative energy research opportunities with academics working in the broad theme of energy systems at Heriot-Watt’s campuses in Edinburgh, Dubai and Malaysia, as well as out with Heriot-Watt.
Key duties and responsibilities

The successful appointee will be expected to:

Research

- Develop a vibrant research group consisting of academics, postgraduate students and research associates that conducts world-class research in sustainable energy systems;
- Actively pursue and lead multi-disciplinary collaborative research projects through the submission of high-quality grant proposals to UKRI and other funders;
- Publish research through high-quality journal and conference papers;
- Supervise and train MSc and PhD students through individual research projects;
- Build collaborative research links with energy systems stakeholder organisations in Orkney and the Highlands and Islands of Scotland.

Teaching

- Provide leadership and vision for the Energy MSc programmes run by ICIT and contribute to the coordination of research related teaching across all of Heriot Watt's campuses.
- Provide high-quality postgraduate teaching through the delivery of lectures, seminars, practical sessions and tutorials at ICIT, with independent learners around the globe, and possibly at overseas Heriot Watt campuses;
- Contribute to community outreach activity in Orkney to communicate the ambitions, impact and results of the research undertaken at ICIT;
- Provide appropriate pastoral support recognising the varied cultural backgrounds of the student cohort;

Collaboration and Leadership

- Work with industry and other public and private external bodies to expand ICIT’s local, national and international networks;
- Establish collaborative research links locally, nationally and internationally;
- Mentor and coach research and academic colleagues in ICIT.

Please note 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

Education, qualifications and experience

Essential:

- First degree in a cognate discipline;
- PhD in an energy related field of science or engineering;
- Successful and demonstrable track record of attracting external research funding;
- Demonstrable knowledge, experience and respected track record in energy systems research with a particular focus upon sustainable energy systems;
- Clear personal research focus and ability to develop an independent research team;
- Ability to lead collaborative University bids for research, consultancy and other research opportunities.
- Demonstrable ability to author high-quality publications;
- Ability to deliver excellent teaching in a higher education environment;
- Ability to work in close collaboration with other disciplines (both internally and externally to Heriot-Watt) relevant to the energy industry, and more particularly its interface with end users and the built environment
- Excellent oral and written communication skills.
- Ability to provide effective leadership to a team of academics, researchers, support services staff and research students.

Desirable:

- Relevant industrial experience in energy systems;
- Experience or demonstrable interest in decarbonisation of the full energy system;
- A network of existing connections in the energy systems industry and academic community.
**Outline terms and conditions**

**DURATION**
The post is a full-time open-ended role.

**GRADE AND SALARY**
Grade 10 - an attractive and competitive salary/package, minimum salary £59,828.

**ANNUAL LEAVE**
You will be entitled to 33 days leave per annum, plus 9 or 10 Buildings Closed Days.

**LOCATION**
Your normal place of work will be Orkney Campus. You will be expected to travel internationally as and when required.

**RELOCATION ASSISTANCE**
Relocation assistance will be available in line with the University’s Travel & Expenses Policy.

**EQUAL OPPORTUNITIES POLICY**
Heriot-Watt University is committed to securing equality of opportunity in employment and to the creation of an environment in which individuals are selected, trained, promoted, appraised and otherwise treated on the sole basis of their relevant merits and abilities. For this purpose all applicants will be asked to answer Equal Opportunities monitoring questions as part of the recruitment and appointment process. Heriot-Watt University values diversity and welcomes applications from all sectors of society.

**How to apply**

Please log in and submit your Cover letter and CV.

For informal discussion about the position please contact Professor Eddie Owens E.H.Owens@hw.ac.uk.

Applications from candidates who require sponsorship to work in the UK will be considered alongside other applications. For further information on this please visit the UK visas and immigrations website https://www.gov.uk/browse/visas-immigration/work-visas.

At Heriot-Watt University we understand that being diverse makes us better which is why we support a culture of respect and equal opportunity, and value diversity at the heart of what we do. We want to increase the diversity of our workplace to underpin a dynamic and creative environment.

We welcome and will consider flexible working patterns e.g. part-time working and job share options.

**Closing date: midnight 5 August 2019**