Head of School: ENGINEERING AND PHYSICAL SCIENCES

Let’s Shape Tomorrow Together | December 2020
Welcome to Heriot-Watt University from the Vice-Principal and Provost

I am delighted that you are interested in becoming the next Head of the School of Engineering & Physical Sciences (EPS) at Heriot-Watt University, a values-led institution that is truly like no other, with five campuses located around the world that excel in teaching, research and wider societal impact.

This is an exciting time as we strive to make a real difference through delivery of our new strategy, Strategy 2025. We will become world-leading in all we do as we continue to fulfil our mission to create and exchange knowledge that benefits society, something we have been doing since our inception in 1821.

Around 30,000 students study with Heriot-Watt across business, engineering, design and the physical, social and life sciences. One third of our students are based in Scotland; about one third learn online in over 190 countries; and about one third are based in Dubai and Malaysia.

More than 3000 of these students study in the School of EPS in Scotland, Dubai and Malaysia, including more than 600 postgraduate students. EPS has a broad offering that cuts across engineering and the physical sciences, and includes unique interdisciplinary degrees bringing together subjects such as photonics and cybertronics.

The diversity of the EPS portfolio reflects the interdisciplinary nature of our outstanding, large-scale research endeavours – the School wins around half the institution’s circa £40M of annual research income. This is powered by the nearly 200 academic and research staff in the school.

I am delighted to be seeking a new Head of School of EPS to join us in summer 2021. In addition to a strong internationally-recognised academic track record, the new Head will be an inspirational leader with excellent management skills. Providing an outstanding student and staff experience and fostering world-class research and scholarship will be at the very heart of what they do.

I invite you to apply to join us if this challenge excites you, and I look forward to the opportunity to discuss both your and our ambitions with you.

Professor Mark J. Biggs CEng FIChemE
Vice-Principal and Provost
School of Engineering and Physical Sciences

The School of Engineering and Physical Sciences (EPS), which has an annual budget of around £60M that is expected to grow significantly going forward, is home to around 200 academic and research staff and more than 3000 students studying brewing & distilling, chemical engineering, chemistry, electrical, electronic & computer engineering, mechanical engineering, and physics.

The school is global, with students located in Dubai, Edinburgh, and Malaysia as well as more widely through our online programmes. It also has formal partnerships with Ocean University, Tianjin University of Science and Technology, and Xidian University, all in China.

The School’s research spans from the fundamentals of science through to its application to real-world problems. This research accounts for around half the annual external research funding of the institution (nearly £24M last year).

Research in the school is organised through five research institutes, each headed by a Director:

- **The Institutes of Photonics and Quantum Science (IPaQS)**
- **Chemical Sciences (ICS)**
- **Biological Chemistry, Biophysics and BioEngineering (IB3)**
- **Mechanical, Process and Energy Engineering (IMPEE)**
- **Sensors, Signals and Systems (ISSS)**

The school is home to a wide range of world-class research. This ranges from quantum and photonic sciences as part of the EPSRC’s Quantum Technology Hubs through to carbon capture and storage and much inbetween. The school is also a key player in the **National Robotarium**, one of the emergent Global Research Institutes, which are at the heart of Heriot-Watt’s strategy, and the **Edinburgh Research Partnership in Engineering (ERPE)**.

The school is home to more than 300 postgraduate research students. The School leads or is a member of the EPSRC-funded Centres of **Doctoral Training in Robotics and Autonomous Systems, Applied Photonics, Critical Resource Catalysis**, and **Condensed Matter Physics**.

The School returned to three Units of Assessment in REF 2014 – General Engineering (jointly with the School of Engineering at the University of Edinburgh), Physics and Chemistry – and will do so again in 2020.

It is home to numerous Fellows of the Royal Academy of Engineering and the Royal Society of Edinburgh and hosts a number of RAEng Research Fellows and Senior EPSRC Research Fellows.
The University's roots go back to 1821 with the establishment of the School of Arts of Edinburgh. The University is therefore approaching a landmark bicentenary anniversary. The School of Arts was the world’s first Mechanics Institute, marking the start of a worldwide movement that would revolutionise access to education in science and technology for ordinary people with the purpose of addressing societal needs. The institution developed into the Watt Institution and School of Arts in 1852 and, in 1855, the Heriot-Watt College with the focus on “the practical application of knowledge and learning for the betterment of society” remaining a defining characteristic. In 1966 the College became Heriot-Watt University, established by Royal Charter, since which time we have continued to focus on innovating and exchanging knowledge for the benefit of society, delivering professionally relevant and career-focused teaching, and developing world-leading innovative research that provides practical solutions to contemporary issues.
Growth of our International University

Named as ‘International University of the Year’ in the 2018 Times and Sunday Times University Guide, we operate in five major locations including campuses at Dubai, UAE, Putrajaya in Malaysia, and Edinburgh, Galashiels and Orkney in Scotland; all work together as a single University:

- In 1989, we opened our Orkney campus, as part of the International Centre for Island Technology
- In 1992, our last departments in Edinburgh relocated to our purpose-built 380 acre parkland Edinburgh campus situated on the western edge of the city
- In 1998 our Scottish Borders campus hosting our School of Textiles and Design was born from our merger with the Scottish College of Textiles
- In 2005, we became the first UK university to create an overseas campus in Dubai’s International Academic City
- In 2014, we opened our state-of-the-art campus in Putrajaya, Malaysia, serving the South East Asia region and beyond
- In 2019 we completed the restoration of Panmure House, the home of economist, Adam Smith, off the Royal Mile in Edinburgh, as a place for debate and wider social enlightenment
- Our new state-of-the-art campus in Knowledge Park in Dubai is set to open its doors to students in April 2021. The campus will include a dedicated student hub, a central student services centre, enhanced library, social learning spaces and more.

Heriot-Watt is one of the most internationally diversified of any UK university. We have developed an unsurpassed international in-country presence beyond our campuses, delivering degree programmes to independent distance learners. Around a third of our 30,000 students study through those routes, in around 150 countries. Combined with campus-based study in Dubai and Malaysia, approaching two thirds of our total student population studies outside of the UK, and one-third of our on-campus students studying in Scotland is from outside the UK.
Our Community

Our values-led approach puts our staff, students and alumni at the heart of everything we do.

Our graduates are sought by the best organisations worldwide. Our graduate association, The Watt Club, is the oldest organisation of its kind in the UK, with over 120,000 alumni worldwide in over 190 countries, and we actively engage with our alumni through a range of tailored programmes in different parts of the world.

The University works in close partnership with its students to create an inspiring and supportive environment where students with diverse backgrounds are able to study together, to learn and develop, and to achieve their ambitions. Student members are represented on the Court (the University’s governing body), the Senate and key committees of the University, contributing to policy making and governance oversight.

The Global Student Liaison Committee, a committee of the Court, oversees and provides assurance to the Court on the arrangements that the University has in place to support the full engagement and representation of our students and the quality of the student experience.

The Student Union in Scotland; the Student Council in Dubai, and the Student Association in Malaysia work with the University to develop a Student Partnership Agreement each year, jointly agreeing the student experience related priorities and actions for the year ahead.

The University has a long history of social inclusion, while being committed to rigorous selection of students on competitive merit. The University strives to achieve a student profile that is socially inclusive; for example, in recent years we have achieved a step change increase in the numbers of entrants from the most disadvantaged neighbourhoods in Scotland and entrants articulating with full credit for qualifications achieved at Scottish colleges.

We are proud to be among the largest providers of Graduate Apprenticeships (GAs) in Scotland, with more than 200 fully funded places having been recently awarded to the University by Skills Development Scotland, to help meet the needs of local and national employers. GAs are offered across a variety of business, technology and engineering courses involving a total of more than 70 companies and public bodies.

We employ over 2500 members of staff across the globe - more than 1100 academic and 1400 professional services colleagues.

To celebrate Heriot-Watt’s bicentenary in 2021, we have set ourselves the target of recruiting one hundred outstanding research academics between 2018 and 2021 to complement our existing world-class research across our campus locations.

The University was granted institutional Athena SWAN Bronze status in 2016, recognising our commitment to advancing careers of women in Higher Education and research.

The University has Gold accreditation from Healthy Working Lives.

We are a ‘Disability Confident’, an Armed Services Covenant and a Living Wage employer.
Our Vision, Mission and Ethos

Our **vision** is to be world-leading within all our areas of specialism.

Our **mission** is to create and exchange knowledge that benefits society.

Our **ethos** means that 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 Strategy

**Strategy 2025** provides the blueprint for the University to be world-leading, with the freedom to explore new ideas of specialism, while building on those areas in which we already excel. We are a distinctive University with global reach and a proud history of providing access to education, ideas and solutions that make a real contribution in the world. Our strategy is based on our heritage, our expertise, our relevance and our global presence, and sets a framework for pursuit of our ambitions imaginatively and energetically. It comprises four main themes as outlined overleaf.
We will build flourishing communities,
developing as a mutually supportive and responsible community with a positive influence on communities around us and on society as a whole.

We will excel in research and enterprise,
tackling problems of real significance to society through our interdisciplinary approach and close collaboration with industry and business, and providing a seamless evolution from fundamental research to innovation and enterprise.

We will pioneer in education,
developing a model of positive education which will prepare our students to be resilient and ready to shape the world.

We will be a globally connected University,
advancing the effectiveness, operation and structure of our University, and supporting academics to excel in their teaching, research and enterprise, and in their interactions with local communities.

SHAPING TOMORROW TOGETHER
Campus life

The Edinburgh Campus is set in 380 acres of established parkland. Over many years significant investments have been made in the campus. It is home to Oriam, Scotland’s National Performance Centre for Sport, providing unparalleled sport and fitness facilities. Other recent developments include: the Lyell Centre occupied jointly with the British Geological Survey; a Research Innovation and Discovery (GRID) facility to provide opportunities for entrepreneurial creativity for students, staff and business. The Research Park has more than 30 organisations some government related, eg. NHS Blood Transfusion Service and Scottish Water and a range of commercial organisations undertaking research and associated operations. The Edinburgh Campus will also soon become the location of the UK’s first National Robotarium due to be opened in 2021.
Heriot Watt has been delivering outstanding education opportunities and research in Dubai for more than 15 years now. It is building on that commitment through its relocation to a brand-new campus in 2021. The University, which is the largest international institution in the UAE, has signed a 10-year lease for a 218,000 sq. ft campus in Dubai Knowledge Park. Staff and students will move to the new campus as of April 2021 – the same year Heriot-Watt celebrates its founding bicentenary. The modern campus will enhance further the student experience across the University’s portfolio of programmes including in data science, computing and AI, business, architecture and design, and engineering.

The Malaysia Campus is based in the modern garden city of Putrajaya, a short distance from Kuala Lumpur. Putrajaya has excellent facilities, infrastructure and transport links. It is developing as an attractive centre of learning. The campus, which sits on 4.8 acres in a stunning lakeside location close to the Putrajaya marina, is home to some 2,000 undergraduate and postgraduate students.

The Orkney campus is based in the town of Stromness. Our specialist campus is home to the International Centre for Island Technology (ICIT), part of our prestigious School of Energy, Geoscience, Infrastructure and Society. Take a virtual tour and see how our ‘living laboratory’ helps shape solutions to a wide range of energy and marine problems.

The Scottish Borders Campus, which is home to the School of Textiles and Design, is set in a countryside location in Galashiels, perfectly situated in the heart of Scotland’s luxury textile industry. The campus, which delivers the best design and production facilities for textiles and fashion in the UK, is shared with Borders College.
Head of School: Engineering and Physical Sciences

Job Description

As Head of School, you will report to the Vice-Principal and Provost, and be a core member of the Global Operations Executive.

You will be responsible for leading the School across all its locations globally, including in Scotland, Dubai and Malaysia.

You will play a central role in leading the implementation of the University’s strategy and thereby deliver Heriot-Watt’s mission.

You will demonstrate the values of the institution in all you do and, through this, foster these within the School and more widely across the institution.

You will lead and manage the School across all its locations globally to deliver the following:

- a clear vision for the School that includes specific research and learning strategies that will deliver the required growth in scale and standing envisaged in the University’s strategy; and
- the development and execution of School rolling annual plans that will deliver the University’s strategy.

You will also lead and manage the School to deliver the following across all its locations globally:

- excellent teaching, research, scholarship, and enterprise;
- an outstanding, sector-leading experience for all the School’s students; and
- an inclusive, supportive environment for staff in which high performance is expected and sought by all.

You will provide wider leadership within the institution, including through:

- profound contributions to the Global Operations Executive and positive engagement with the University Executive;
- deep commitment to change initiatives within the School and across the University as a whole; and
- positive engagement with other schools and the Professional Services to develop and deliver new initiatives grounded in the University’s strategy.

You will lead the building of partnership with education and industry globally.

You will lead the building and projecting of the School’s profile and influence within the University and externally, including within government bodies, funding councils, and industry globally.

You will be responsible for effectively managing all the School’s financial and people resources, including delivering the School’s financial business plan on an annual and ongoing basis.

You will continue to maintain a high-quality programme of personal research and/or scholarship during your tenure as Head of School.

You must be able to travel as needed, including to all our campuses in Scotland, Dubai and Malaysia.

You will undertake other relevant duties from time to time as directed by the Vice-Principal and Provost.
**Personal Qualities**

- A commitment to the vision, mission, and values of the University, and its strategy.
- A deep commitment to equality, diversity, and inclusion
- Strong intercultural understanding.
- Sound judgment.
- Insightful and creative.
- Proactive and dynamic.
- The personality and presence to inspire others.
- An excellent listener and communicator, being able to engender trust and engage others.
- The ability to maintain focus and demonstrate resilience in the face of adversity.

Please note the successful applicant will be appointed as a Professor to the School of Engineering and Physical Sciences. The secondary appointment to Head of School will be made for an initial period of 5 years with an option to renew.

To apply for this role please use the following link: [https://www.hw.ac.uk/uk/jobs/job_SVJDMzAwNDY.htm](https://www.hw.ac.uk/uk/jobs/job_SVJDMzAwNDY.htm)

The Job Reference is IRC30046

Please send in a maximum two page Covering Letter indicating why you think you are suitable for this post and additionally include an up-to-date CV. Informal enquiries can be made in the first instance to our Head of Recruitment, Gary Anderson at g.anderson@hw.ac.uk

Closing Date for applications is February 12th 2021.

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**Person Specification**

This section details the personal attributes that are required to undertake the full remit of the role.

**Skills, knowledge, experience, and qualifications**

- Evidence of successful leadership within an academic unit such as an academic department, research centre, or similar.
- Evidence that you can see the bigger institutional picture and how you will contribute to this as a leader of an academic unit such as a school.
- Evidence of an ability to lead major cultural change in an academic environment.
- Evidence of successful leadership and delivering of major change, projects and/or the like.
- Evidence of strong financial and business acumen and the ability to optimise resource utilization.
- Evidence of an outstanding international reputation in research and/or scholarship.
- Understanding of the higher education landscapes of particular relevance to Heriot-Watt.
- Ph.D. in a field related to one of the University’s core disciplines.