

## Job Description: Associate Professor in Aerospace Engineering–Enhanced Research

<b>College/School:</b>	Faculty of Science and Engineering
<b>Department/Subject:</b>	Aerospace Engineering
<b>Salary:</b>	£51,034 to £59,135 per annum with USS benefits
<b>Hours of work:</b>	Full time – 35 hours per week
<b>Contract:</b>	This is a permanent position
<b>Location:</b>	This position will be based at the Bay Campus.

<b>Introduction</b>	<p>To deliver its sustainable top 30 ambition Swansea University needs a workforce with the differentiated skills necessary to ensure that it can deliver excellence in research, teaching, learning, and the wider student experience, and to be a powerhouse for the regional economy and internationally.</p> <p>Swansea University’s vision is to transform lives and futures by providing an outstanding academic environment with a balance of excellence between world-class teaching and research, driving impact that is enabled by effective regional and global collaborations.</p> <p>The Department of Aerospace Engineering is one of five departments within the newly formed School of Aerospace, Civil, Electrical, General and Mechanical Engineering, led by Professor Antonio J. Gil. The School is one of four within the Faculty of Science and Engineering, led by Professor Kenith Meissner, Executive Dean and Professor Johann Sienz, Deputy Executive Dean.</p> <p>The Department is seeking applications from ambitious and talented individuals to join our academic team in 2021. This is an exciting opportunity to join a vibrant and highly regarded UK Science and Engineering Faculty, located on a beautiful beachfront campus in the city of Swansea. Swansea is a coastal city that is both picturesque and cosmopolitan, offering an excellent quality of life. Our stimulating, multidisciplinary environment enables and inspires excellence.</p>
<b>Background information</b>	<p>The Faculty of Science and Engineering has an outstanding research environment and infrastructure to carry out research in nationally and internationally important areas of Physical Sciences and Engineering. Swansea Engineering is at the forefront in areas of strategic importance to the country and the world including aerospace technology, green energy, energy storage, digital engineering, materials and manufacturing. Our strategic relationship with industries in these and other areas drive cutting-edge research within engineering. In the most recent Research Excellence Framework (REF) in 2014, research in Engineering was ranked 10th in the UK for the combined score in research quality across the Engineering disciplines. 94% of research produced by our academic staff is of World-Leading (4*) or Internationally Excellent (3*) quality. With our world-class research centres and with more than £500m investment into a new Bay Campus infrastructure, the Faculty of Science and Engineering stands out as one of the best centres of excellences in the country. Swansea University is one of 11 institutions that is a member of the prestigious UK Aerospace Research Consortium.</p> <p>All of our Engineering subjects have been ranked in the UK’s Top 15 by The Times and Sunday Times Good University Guide 2020. Swansea University holds the Teaching Excellence Framework (TEF) Gold award, the highest award for teaching excellence at UK Universities. Engineering at the Faculty holds the ATHENA Silver Award medal, acknowledging its commitment to gender equality.</p> <p>Engineering degrees delivered within the <a href="#">Department of Aerospace Engineering</a> at Swansea University are aided by world-leading technology, which has contributed to many exciting projects:</p>

- Aerodynamics for the current world land-speed record car, Thrust SSC, and the future land-speed record car [BLOODHOUND SSC](#)
- Design of the double-decker super-jet Airbus A380
- The Reaction Engines Skylon spaceplane

We are seen as a leader in many aspects of aerospace, both in the UK and internationally. We pride ourselves on the extensive collaborations with international companies including:

- BAE Systems
- Rolls-Royce
- EADS
- Airbus



For more details about the facilities within the Aerospace Department at Swansea University please [click here](#).

The Faculty of Science and Engineering is seeking to appoint a motivated individual to enhance our research and learning and teaching within Aerospace Engineering. We are seeking applicants with strong research track potential/record, as well as experience of innovative teaching methods, who care about the student experience; and who can contribute to the development of a modern curriculum supported by lab-based practical and project-based learning. We welcome applicants with demonstrable experience, either in academia or industry, of working/researching/teaching in the areas of space systems/technology and/or aircraft design and/or flight vehicle dynamics.

Applicants must have the potential to play a significant role in the future development of the discipline. The post also requires high quality delivery of teaching and student learning, graduate supervision and a commitment to enhancing the overall student experience. The appointee will be a member of the Aerospace Research Group within the Zienkiewicz Centre for Computational Engineering (<http://www.swansea.ac.uk/engineering/zcce/>). The appointed postholder will be embedded into a vibrant and dynamic environment with the capacity to interact with other research groups across the Faculty of Science and Engineering.

This post will contribute to the IMPACT operation. IMPACT (Innovative Materials, Processing and Numerical Technologies) has been part-funded by the European Regional Development Fund through the Welsh Government and Swansea University. IMPACT will deliver a research centre in a new purpose built facility with state-of-the-art equipment, providing a sustainable, highly competitive, world-class resource and capacity and driving innovation.

Informal enquiries are welcome and should be directed to:

**Professor Antonio J. Gil** [a.j.gil@Swansea.ac.uk](mailto:a.j.gil@Swansea.ac.uk) (*School of Aerospace, Civil, Electrical, General and Mechanical Engineering*)

**Academic Career Pathways**

The Academic Career Pathways (ACP) scheme is designed to ensure that academic strengths whether in research, teaching, the wider student experience, leadership or innovation and engagement, are all appropriately recognised, developed, valued, and rewarded. There are three enhanced academic strands: Enhanced Teaching and Scholarship; Enhanced Research; and Enhanced Innovation and Engagement.

	<p><b><i>This position will align to the Enhanced Research career pathway.</i></b></p> <p>For more information on Academic Career Pathways, please click <a href="#">here</a>. These provide indicative performance levels for all academic staff which will be used throughout the recruitment process. Where there are numeric indicators these will be considered in light of the stage of career, hours of work and other commitments. This may be personal circumstances or work related activities outside of academia such as in industry or a clinical setting. You are very welcome to provide any relevant individual circumstances such as career breaks, any periods of leave or secondment or any other absences, which should be taken into account and how these have had an impact on your career development.</p>
<b>Main Purpose of Post: Enhanced Research</b>	<ol style="list-style-type: none"> <li>1. <u>Research Outputs and Activity</u>: Play a significant role in the strategic direction and development of the research area, sustain a track record of research outputs and their dissemination in high quality publications or other media.</li> <li>2. <u>Research Projects and Grants</u>: Obtain significant research funding or other resources to underpin research with responsibility for developing and leading a major programme of individual or collaborative research.</li> <li>3. <u>Esteem</u>: Achieve external recognition as an established authority within the discipline, contributing to the wider academic or professional community.</li> <li>4. <u>Postgraduate Research Student Supervision and Development</u>: Sustaining a record of PhD supervision and completion.</li> </ol>
<b>Management</b>	<ol style="list-style-type: none"> <li>5. <u>Contributing to our Activities</u>: Take part in formulating College/School or University decisions and contributing to activities beyond the immediate research, teaching or scholarship commitments.</li> <li>6. <u>Participating in Professional Activities</u>: Engage with professional activities related to the discipline through networking at conferences or involvement in external groups.</li> <li>7. <u>Managing Self and Others</u>: Support and enable the development of colleagues, students and/or yourself.</li> </ol>
<b>Teaching and Scholarship</b>	<ol style="list-style-type: none"> <li>8. <u>Teaching Delivery and Review</u>: Effective delivery of teaching, assessment and quality assurance of modules or other equivalent components of the taught portfolio. Review course content and materials, and develop, design and update materials in compliance with quality standards.</li> <li>9. <u>Teaching Innovation and Impact</u>: Teaching practice based innovation which is up to date and informed by research or professional practice.</li> <li>10. <u>Advancing and Applying Practice</u>: Responsibility for advancing personal teaching practice.</li> </ol>
<b>General Duties</b>	<ol style="list-style-type: none"> <li>11. Promote equality and diversity in working practices and maintain positive and collaborative working relationships</li> <li>12. Conduct the job role and all activities in accordance with safety, health and sustainability policies and management systems, in order to reduce risks and impacts arising from the work activity</li> <li>13. Ensure that risk management is an integral part of any decision making process, by ensuring compliance with the University's Risk Management Policy.</li> </ol>

<b>Person Specification Criteria</b>	<b>Typically evidenced by:</b>
<b>Qualifications</b>	
1. A PhD in a relevant subject area or a degree and relevant professional experience or qualification	<i>First degree in an aero-specific branch of engineering, such as aerospace engineering or aeronautical engineering. PhD or equivalent degree in a topic related to Aerospace engineering or closely-related field.</i>
2. Recognised teaching qualification that would lead to Fellowship of the Higher Education Academy (HEA) or a commitment to achieve this	<i>If you do not have a recognised teaching qualification then evidence is required of a commitment to work towards Fellowship of the Higher Education Academy (HEA) or equivalent.</i>
<b>Enhanced Research</b>	
3. A sustained track record of research outputs in high quality publications or other media showing a	<i>One world leading and three internationally excellent outputs in the last five years.</i>

continuing upward trajectory in the quality of research outputs.	
4. Success in obtaining significant funding or other resources to underpin original research, with responsibility for developing and leading a major programme of individual or collaborative research.	<i>The value of such awards should be £57,000 per year, averaged over the last 5 years, as a Principal Investigator.</i>
5. External recognition as an established authority within the discipline, contributing to the wider academic or professional community.	<i>Evidence of international peer recognition over the last 5 years. A record of sustained conference participation that equates to attending one conference with national or international reach each year as an invited speaker.</i>
6. A sustained record of PhD supervision and completion.	<i>Successful completion of at least one postgraduate research (PGR) student as first supervisor in a 5 year period and typically acting as first supervisor for at least 1 student per year, as part of a sustained record of PGR student supervision and completion (including PhD).</i>
<b>Core Teaching</b>	
7. Evidence of or ability to undertake effective delivery of teaching, assessment and review of modules or other components of the taught portfolio.	<i>-ability to teach core Engineering subjects in Aerospace Engineering. - a good teaching feedback and/or through improved progression or retention - Acting as an effective tutor or student project supervisor with successful outcomes. - a commitment to innovative teaching and CPD</i>
<b>Core Management</b>	
8. Taking an active part in decisions and activities in an academic unit or institution, beyond own research and teaching commitments.	<i>Examples showing personal contribution and impact.</i>
<b>Subject Specific</b>	
9. Subject specific criteria	<i>- Application/CV - Candidate must show an aptitude and willingness to deliver teaching across the range of topics covered by the <a href="#">Swansea University Aerospace Engineering degree programmes</a> - Demonstrable experience, either in academia or industry, of working/researching/teaching in the areas of space systems/technology and/or aircraft design and/or flight vehicle dynamics. - Demonstrable experience in the supervision of student research projects. - Applicants with experience in aerospace design are specially welcome.</i>

