

Wind Turbine Performance Enhancement Engineer

Department	Electronic and Electrical Engineering (www.strath.ac.uk/engineering/electronicalelectricalengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	KTP	Reference No	322121
Reports To	Dr Adam Stock (Academic Supervisor); Mark Ward (Company Supervisor)	Grade:	RS79
Salary Range:	£30,000 to £34,000 + £4,000 training and development allowance	Contract Type:	Fixed Term (24 months)
FTE	1	Closing Date	31/10/2020

Job Advert

The Department of Electronic and Electrical Engineering in partnership with Natural Power (www.naturalpower.com) is seeking to appoint a Knowledge Transfer Partnership (KTP) Associate focussing on the development of a wind turbine monitoring solution for novel control and extended life operations.

Natural Power is an international renewable energy consultancy with a presence in the UK, Europe, the USA and South America, who work with clients globally. Our mission is to support our clients by delivering unrivalled renewable energy expertise and services. We aim to support a low carbon economy by delivering safe, clean, reliable and competitive renewable energy. We do this by employing the best specialists who share our passion for renewable energy, and we share our knowledge with clients and partners who hold a similar vision and values to ours. As pioneers of positive renewable change, we continue to contribute to its evolution and growth, creating a better environment for the future of our planet and the generations to come.

As part of our Advisory and Analytics Directorate you will contribute significantly to our ongoing development and achieving the long term aims of the company. While the post is initially for a period of two years, it is our hope and aspiration that the appointed Associate, on completion of a successful project, would continue to carry the work forward as an employee of Natural Power.

The successful candidate will have the opportunity to develop their technical, leadership and communication skills to help Natural Power grow their business. Based in their Stirling office, you will report directly to Dr Iain Dinwoodie (head of Advanced Performance Engineering). The post is concerned with the development of modelling techniques, turbine monitoring, and controller development to assess wind turbine performance and extend the lifetime of assets. You will be employed by the University of Strathclyde but will spend most of your working time at the company's premises in Stirling. A key feature of the KTP position is a personal training and development allowance of £4,000 that you can use to develop skills related to the project that will help you to advance your career as a wind energy professional. You will also have the opportunity to register for a research degree (free of charge) based on the work carried out on the project.

To be considered for the role you should hold a bachelor's degree in engineering or similar, with either a Masters degree in a related and relevant subject or significant experience within the wind industry. Applicants with a PhD in either a wind energy related topic or in dynamics and control are strongly encouraged to apply. Practical experience of programming in either an industry or research environment would be advantageous.

Excellent interpersonal and communication skills are essential along with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences. This position includes extensive training with a generous personal development budget (£4k) and the opportunity to develop both industry and research skills for your future career. You will be the project lead, managing your own workload and ensuring outputs whilst having continuous support from your academic and company supervisors.

Candidates with a broad knowledge of wind energy, especially control, turbine simulation, and loads measurement/analysis are particularly encouraged to apply. Some project management experience is desirable, and it can also be developed within the role. Experience coding (preferably, but not necessarily in MATLAB, python, and C) is essential

Above all else, it is essential that the candidate be self-motivated and keen to lead the project, being pro-active in engagement with the academic and industrial team and with any other stakeholders encountered throughout the project. The ability to make and maintain professional relationships, keep to tight time requirements for project delivery and to communicate professionally and scientifically are also essential.

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses improve their competitiveness and productivity through better use of knowledge, technology and skills that reside within the UK knowledge base. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: www.ktpws.org.uk. There are over 200 vacancies currently available at www.ktp-uk.org/graduates or search 'KTP jobs'.

Job Description

Brief Outline of Job:

Supported by the academic team at the University of Strathclyde and the software solutions team at Spartan Solutions, the KTP Associate will deliver a suite of tools aimed at analysing and enhancing wind turbine performance with a focus on life time extension.

Main Activities/Responsibilities:

1.	Analysis of wind turbine operational data in order to identify potential operational issues that may impact on turbine lifetime
2.	Development of models of a variety of fidelities, including "digital twins" to model turbine performance and potential improvements in performance from control and operational changes
3.	Implementation of solutions on wind farms, including collection of relevant data to assess performance in the field.
4.	Act as a conduit to transfer knowledge from academia to industry.
5.	Formulate project plans for delivery milestones.
6.	Plan and manage workload with guidance from colleagues as required.
7.	Support business needs of product through end-customer engagement.
8.	Engage in continuous professional development both within the university and industrial sponsor.
9.	Documentation of work to a professional standard
10.	Engagement with the wider industry and academic community through publication and presentation of work at conferences and tradeshow

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 Master's degree in an engineering discipline or undergraduate degree with extensive experience in the wind industry

D1 PhD in a relevant discipline

D2 Chartered engineer or working towards chartered engineer status

Experience

E2 Experience programming for engineering applications

D3 Understanding and experience of dynamics and controller development, implementation and testing

D4 A broad understanding of wind energy technology

D5 Experience using DNV GL Bladed, MATLAB, and Python software

D6 Project management and stakeholder management experience

Job Related Skills and Achievements

E3 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

E4 Developed ability to conduct both individual research and development work and contribute as part of a wider team and group

E5 Able to write, speak and present in English to a high standard. Includes writing reports and academic papers in an appropriate scientific manner.

Personal Attributes

E6 Self-motivated and driven to develop their career in the wind industry

E7 Willingness to proactively engage with stakeholders and develop projects

E8 Able to manage time and milestone deadlines effectively.

E9 Adaptable and flexible in methods of working (including remote working) and making and building relationships with colleagues and clients.

E10 Self-reliant and able to work independently towards defined goals and milestones.

Other Relevant Factors

E11 Comfortable working at heights and experience of following health and safety regulations

E12 Willingness to engage in site visits in remote locations

D7 Driving licence strongly desirable

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Dr Adam Stock, Knowledge Exchange Fellow (adam.stock@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the KTP staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

