Asset Reliability Analyst (KTP Associate)
School of Engineering

Closing date: 17 May 2019
Interview date: TBC
Reference number: ENG137A
Introduction

The University of Aberdeen and Optima Asset Maintenance Solutions are seeking to recruit an enthusiastic Asset Reliability Analyst (KTP Associate) to work on a new innovative initiative.

We are seeking to recruit a highly motivated individual for the position of an Asset Reliability Analyst (KTP Associate), with a background in engineering or applied sciences, to be part of a Knowledge Transfer Partnership (KTP) between the School of Engineering, University of Aberdeen and Optima Asset Maintenance Solutions Ltd.

The key objective of this role has a focus on developing a data resource and innovative processes to improve safety and cost-effectiveness in the maintenance of Oil & Gas facilities. This will be undertaken by extending an existing in-house software platform to capture dynamic reliability data of the assets, to developing new innovative tools to inform decision making processes.

The Asset Reliability Analyst (KTP Associate) will be based at Optima Asset Maintenance Solutions Ltd’s office in Aberdeen, supplemented with regular visits to the School of Engineering at the University of Aberdeen.

Optima Asset Maintenance Solutions Ltd are a provider of physical asset management consultancy services targeted at the mining and Oil & Gas industries. They have a global reach from their main office in Aberdeen, Scotland and a subsidiary office in Johannesburg, South Africa (http://optimal.world). The Asset Reliability Analyst (KTP Associate) will spend the majority of their time based at the company offices.

The Asset Reliability Analyst (KTP Associate) will have opportunities to work in close collaboration with industrial stakeholders, key clients and the academic team at the University of Aberdeen to deliver the outputs of the project.
Job description

Main purpose of the role:

The Asset Reliability Analyst (KTP Associate) will work in partnership with the company staff and University supervisors to develop a new asset reliability optimisation tool for the assessment and management of critical offshore assets, by extending an existing in-house maintenance modelling software platform. This position will provide an excellent opportunity for a graduate who wishes to extend their skills in data analysis, uncertainty quantification, time-variant reliability modelling and physical failure analysis within an optimisation framework.

This new position has been created to enable Optima Asset Maintenance Solutions Ltd to develop new analytical tools and services to expand their service offering to a growing market. This will give the Asset Reliability Analyst (KTP Associate) the opportunity to directly engage with key stakeholders to identify key user needs to enable them to develop a database which will apply appropriate machine learning protocols to retrieve information to inform management strategies for essential assets.

The developed tool will comply with Reliability Centred Maintenance principles (SAE JA 1011:2009) and the ISO14224 framework for the Oil & Gas industry.

This position also provides a training programme of Management and Leadership modules offered to KTP Associates along with a bespoke training budget for personal development.

Key responsibilities:

Asset Reliability Analyst (KTP Associate)

The is expected to

- address the challenges in system coding, data standardisation, and creation of regulatory templates;
- develop expertise in data sourcing and analysis for offshore assets, and to answer crucial questions on data sufficiency and expert opinion integration;
- perform time-variant failure analysis based on reliability, maintainability, availability principles;
- apply appropriate data mining models to address the data limitations;
- develop and validate a new asset reliability optimisation tool based on risk management principles;
- present research outcomes at relevant conferences and events,
- correlate information from extended research for publication in top rated journals.

At a glance

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<th>Salary:</th>
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<td>Up to £36,000</td>
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<th>Hours of work:</th>
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<td>Full time</td>
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<th>Contract type:</th>
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<td>24 months – full time appointment</td>
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Candidate background

The successful candidate will be expected to have a high degree of numerical and analytical skills coupled with strong programming expertise. An excellent understanding of risk and reliability modelling techniques would also be highly desirable.

Experience in functional failure analysis, database management, and risk based maintenance modelling would be highly advantageous.

The position will require skills from a range of disciplines (data management, engineering failure analysis, and reliability modelling) and as such the candidate is expected to effectively grasp, implement and communicate multidisciplinary concepts.

Relevant industrial experience in asset reliability modelling and knowledge of Oil and Gas sector would be beneficial. Further details are given in the ‘Person specification’ section.

Terms of appointment

Salary will be paid up to £36,000 and negotiable with placement according to qualifications and experience. The Asset Reliability Analyst (KTP Associate) will also receive a tax-free training and personal development budget of £4,000.

As this post is funded by Innovate UK and Optima Asset Maintenance Solutions Ltd it is offered for a period of 24 months.

Any appointment will be made subject to satisfactory references and a 6 month probation period.

For further information on various staff benefits and policies please visit www.abdn.ac.uk/staffnet/working-here

This post does not meet the minimum requirements as issued by UK Visas & Immigration (UKVI) to qualify for an employer-sponsored visa. We are therefore unable to consider applications from candidates for this post who require sponsorship to work in the UK.
## Person specification

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<th>Education/Qualifications</th>
<th>Essential</th>
<th>Desirable</th>
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<td><strong>Academic, technical and professional education and training</strong></td>
<td>- A minimum of a 2:1 degree or higher (1st or Masters) in Engineering or Applied Sciences (Computer Science, Mathematics) which includes a high degree of numerical and analytical skills coupled with strong programming skills.</td>
<td>- A Masters degree and high level knowledge of risk and reliability modelling is highly desirable.</td>
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<th>Work and Other relevant experience (including training)</th>
<th>Essential</th>
<th>Desirable</th>
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| **eg Specialist knowledge, levels of experience, supervisory experience, research** | - Excellent mathematical and statistical ability, with a risk/reliability modelling focus.  
- Strong programming experience in C/C++/C#/Python and Matlab is required.  
- Hands-on experience in advanced MS Excel functions. | - Basic familiarity with Artificial Intelligence focusing on machine learning techniques.  
- Prior industrial experience demonstrating practical use of risk management schemes  
- Knowledge of XML/HTML/PHP and SQL. |

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<th>Personal qualities and abilities</th>
<th>Essential</th>
<th>Desirable</th>
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| **eg initiative, leadership, ability to work on own or with others, communication skills** | - Strong leadership skills.  
- Desire to develop commercial and business experience.  
- Excellent organisational and communication skills.  
- Ability to work independently and with multi-skilled teams.  
- Ability to take initiative and manage project. | |

| Other |  |  |
|-------|  |  |
| **eg special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.** |  |  |
The University

Founded in 1495, Aberdeen is Scotland’s third oldest University and the fifth oldest in the UK. Ranked within the world top 160 in the Times Higher Education Rankings 2019 and named Scottish University of the Year in the Times and Sunday Times Good University Guide 2019. Aberdeen is ‘open to all and dedicated to the pursuit of truth in the service of others’.

Aberdeen is a broad based, research intensive University, which puts students at the head of everything it does. It has significant academic strengths and potential across a wide variety of disciplines. Outstanding in a wide range of discipline areas, Aberdeen has also been credited for its international reach and its commercialisation of research ideas into spin out companies.

The University has over 14,000 matriculated students and 3,600 staff representing 130 nationalities. We encourage bold thinking, creativity and innovation and we nurture ambition with many opportunities for professional and personal development in an inclusive learning environment which challenges, inspires and helps every individual to reach their full potential.

The University combines a distinguished heritage with a forward looking attitude. In the past few years, the University has encouraged creativity in its academic staff, broken new ground with an innovative curriculum, and developed state-of-the-art facilities including the new Sir Duncan Rice Library and the Aberdeen Sports Village and Aquatics Centre. In looking to the future, the University seeks to enhance its reputation as one of the world’s leading Universities by moving forward with ever more ground breaking research; ensuring students have an intellectual and social experience second to none; and capitalising upon the dual role as one of the major institutions of the north and as a cornerstone of regional economic and cultural life.
The city and the region

Aberdeen and Aberdeenshire

With a population of approximately 230,000, the city stands between the Rivers Dee and Don. This historic city has many architectural splendours and the use of its sparkling local granite has earned Aberdeen the name of the Silver City. Recognised as the oil capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live.

Aberdeen enjoys excellent communication services with other European cities - e.g. flying time to London is just over one hour with regular daily flights. There are direct air links to London (City, Gatwick, Heathrow, and Luton), Manchester, Birmingham, Leeds, Southampton, Belfast and East Midlands within the U.K. There are also flights to international hub airports: Amsterdam (Schiphol), Paris (Charles De-Gaulle) as well as flights to other European destinations. http://www.aberdeenairport.com Road and rail links are also well developed.

The Grampian Region which took its name from the Grampian Mountains has a population of approximately 545,000. It is made up of five districts – Aberdeen, Banff & Buchan, Gordon, Kincardine & Deeside and Moray. The city and the surrounding countryside provide a variety of urban, sea-side and country pursuits. Aberdeen has first class amenities including His Majesty's Theatre, Music Hall, Art Gallery, the Aberdeen Exhibition Centre, Museums, and Beach Leisure centre. Within a short time, beach pursuits, equine activities, salmon, trout and sea fishing, hill-walking, mountaineering, golf, sailing, surfing and windsurfing can be reached. The city and the surrounding countryside are repeatedly given high ratings for quality of life in surveys.

Aberdeenshire is one of Scotland’s most appealing regions. Royal Deeside and the Cairngorms National Park are within easy access of the city, and there are a variety of towns and villages scattered along the coastline.

Aberdeen and Aberdeenshire cater for a wide range of tastes in sporting and cultural activities.

To find out more about Aberdeen and Aberdeenshire go to www.visitabdn.com
How to apply

Online application forms are available at www.abdn.ac.uk/jobs

The closing date for receipt of applications is 17 May 2019

Should you wish to make an informal enquiry please contact either Terry Ebinum (terry.ebinum@optimal.world) or Dr Srinivas Sriramula (s.sriramula@abdn.ac.uk).

Please do not send application forms or CVs to Dr Srinivas Sriramula

Please quote reference number ENG137A on all correspondence

The University pursues a policy of equal opportunities in the appointment and promotion of staff.