



**Faculty of Technology**

**Department of Mathematics**

**Research Fellow in the Logistics of Offshore Wind Farms**

**ZZ004413**

**Information for Candidates**

**THE POST**

Please see the attached job description and person specification.

**TERMS OF APPOINTMENT**

**Fixed-term**

**Full-time**

Salary is in the range from £34,520 to £37,706 per annum and progress to the top of the scale is by annual increments payable on 1 September each year. Salary is paid into a bank or building society monthly in arrears.

Working hours are 37 per week and are usually worked between 8.30 am and 5.15 pm Monday to Thursday and between 8.30 am and 4.15 pm on Friday with one hour and ten minutes for lunch. As this post is research based, working hours will vary depending on the needs of the project so a flexible approach is required. Specific working hours will be agreed once an appointment has been made. Overtime is not normally payable but time off in lieu may be given.

Annual leave entitlement is 35 working days in a full leave year. The leave year commences on

1 October and staff starting and leaving during that period accrue leave on a pro-rata basis. In addition, the University is normally closed from Christmas Eve until New Year’s Day inclusive and on bank holidays.

The Appointee will be entitled to join the Local Government Pension Scheme. The Scheme's provisions include a final salary based, index-linked pension with an option to exchange some pension for a lump sum on retirement together with dependants’ benefits. Contributions by the employee are subject to tax relief.

There is a probationary period of six months during which new staff are expected to demonstrate their suitability for the post.

It is a condition of the appointment for the proper performance of the duties of the post that the appointee will take up residence at a location such that they are able to fulfil the full range of their contractual duties. This residential requirement will be expected to be fulfilled within twelve months of taking up the appointment. The University has a scheme of financial assistance towards the cost of relocation, details of which can be found on the University website:

<http://www.port.ac.uk/departments/services/humanresources/recruitmentandselection/informationforapplicants/removalandseparationguidelines>

There is a comprehensive sickness and maternity benefits scheme.

**All interview applicants will be required to bring their passport or full birth certificate and any other 'Right to Work' information to interview where it will be copied and verified.** The successful applicant will not be able to start work until their right to work documentation has been verified.

Please note if you are the successful candidate once the verbal offer of employment has been made and accepted, references will be immediately requested. It is the University’s policy that all employment covering the past three years is referenced. A minimum of two references is required to cover this three year period of employment or study (where there has been no employment). One of your referees mustbeyour current or most recent employer.

The successful candidate will need to bring documentary evidence of their qualifications to Human Resources on taking up their appointment.

To comply with UKVI legislation, non-EEA candidates are only eligible to apply for this post if it has been advertised for a total of 28 days.

If the position has a requirement for Disclosure and Barring Service check (DBS), this will be stated in the advert. The DBS Application Form will be provided once the selection process has been completed.

All applications must be submitted by Midnight (GMT) on the closing date published.

**UNIVERSITY OF PORTSMOUTH – RECRUITMENT PAPERWORK**

1. **JOB DESCRIPTION**

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| **Job Title:** | Research Fellow in the Logistics of Offshore Wind Farms |
| **Faculty/Centre:** | Technology |
| **Grade:** | 7 |
| **Department/Service:**  **Location:** | Department of Mathematics |
| **Position Reference No:** | ZZ004413 |
| **Responsible to:** | Professor Djamila Ouelhadj, Head of Logistics, Operational Research, and Analytics Group and Professor David Brown |
| **Responsible for:** | - |
| **Effective date of job description:** | December 2017 |

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| **Purpose of Job:** |
| To conduct research and algorithmic development related to the Windfarm Autonomous Ships Project (WASP) funded by Innovate UK. This is a collaborative multi-disciplinary project involving the Logistics, Operational Research and Analytics group and the Institute of Industrial Research, Faculty of Technology at the University of Portsmouth; **ASV Unmanned Marine Systems;** **Houlder Ltd;** Offshore Renewable Energy Catapult; and SeaRoc Group.  The vision of the project is to undertake industrial research to characterise the issues, potential cost savings and critical areas for development to enable autonomous vessels to be used for parts supply and crew transfer for maintenance in offshore renewables, to reduce the cost of energy, and reduce health and safety risks. The specific role of the University of Portsmouth in this project is to develop board AI health diagnostics algorithms for autonomous vessels, and real-time routing and scheduling models and algorithms for optimal allocation of available vessels and their routes for spare parts distribution with respect to minimum fuel consumption (fuel efficiency), minimum time underway, or any desired combination of these factors. The optimisation models and algorithms will take into account real-time information on forecasts of weather and sea conditions, vessel's individual characteristics for a particular transit, cargo load, frequency of transport, availability and capacity of the vessels.    The research fellow will be responsible for taking a lead in the development and coding of the models and algorithms and production of testing. The researcher will liaise with academics at the University of Portsmouth and industrial partners in order to achieve this goal. The models and algorithms developed are expected to be of sufficient scientific novelty and application worth that they will lead to articles published in leading Operational Research, Transportation and Artificial Intelligence scientific journals. The research fellow is also expected to disseminate their research findings at project meetings, international conferences and stakeholder events. The experienced researcher will also be responsible for supporting the general research activity in the Logistics, Operational Research, and Analytics group and Institute of Industrial Research, and encouraging more junior researchers such as PhD students in their research. |
| **Key Responsibilities:** |
| 1. To manage and be responsible for the completion of the research project, ensuring that aims, objectives and deliverables are met according to the project plan. 2. To disseminate the project research findings to a variety of stakeholders and to write papers for refereed journals and conferences and project reports.   Additional expectations of the role holder   1. To communicate with team members, liaise and network with relevant professional bodies. 2. To contribute to both internal and external project meetings providing relevant and timely information in order to aid decision making. 3. To solve problems that occur during the length of the research project applying knowledge of subject area. 4. Can deliver short one-off training sessions or lectures such as graduate training courses. 5. To contribute to seminars and discussions in the Mathematics Department and the Institute of Industrial Research. 6. To contribute to public outreach activities. 7. To participate in and contribute to a performance & development review (PDR), ensuring that the work produced is in line with the Department/Faculty/University aims. 8. To comply with the University's Health and Safety Policy and pay due care to own safety and the safety of others. Report all accidents, near misses and unsafe circumstances to the line management. 9. Any other duties as required by the Head of School. |
| **Working Relationships (key individuals the job holder would be working with):** |
| Managed by Prof. Andrew Osbaldestion, Head of the Department of Mathematics; and Prof Djamila Ouelhadj Head of the Logistics, Operational Research, and Analytics Group for day to day management.  Other members of the Logistics, Operational Research, and Analytics group; Institute of Industrial Research; industrial partners; support/technical staff on day-to-day issues; associates operating in the same area. |

1. **PERSON SPECIFICATION**

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| **No** | **Attributes -** | Rating | Source |
| **1.** | **Specific Knowledge & Experience** |  |  |
|  | Knowledge of Operational Research, Logistics, or related discipline | E | AF, S |
|  | Experience of developing Operational Research, Artificial Intelligence, or Logistics algorithms | E | AF, S |
|  | Knowledge of renewable energy sector | D | AF, S |
|  | Experience in mMachine Condition Based Monitoring | D |  |
|  | Experience in dealing with industrial and/or governmental stakeholders | D | AF, S |
| **2.** | **Skills & Abilities** |  |  |
|  | Ability to plan, organise and prioritise workloads | E | AF, R, S |
|  | Good communication and interpersonal skills | E | AF, R, S |
|  | Writing research papers and/or project reports | E | AF,S |
|  | Excellent presentation skills | D | R, S |
|  | Project Management skills | D | AF, R, S |
|  | Computational and programming skills | E | AF,S |
| **3.** | **Qualifications, Education & Training** |  |  |
|  | Completed PhD in relevant subject or equivalent research experience | E | AF |
|  | Refereed publications in leading international journals | D | AF |
| **4.** | **Other Requirements** |  |  |
|  | Ability to motivate and engage others in research | D | AF, R, S |
|  | Ability to work on own initiative and as part of a team | E | AF, R, S |
|  | Ability to work to tight deadlines | E | AF, R, S |
|  | Willingness to undertake travel to industrial and project partners | E | AF,S |

**Legend**

Rating of attribute: E = essential; D = desirable

Source of evidence: AF = Application Form; R = References; S = Selection Programme (including Test, Presentation, References)

**JOB HAZARD IDENTIFICATION FORM**

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| **Please tick box(s) if any of the below are likely to be encountered in this role. This is in order to identify potential job related hazards and minimise associated health effects as far as possible. Please use the** [**Job Hazard Information**](http://www.port.ac.uk/departments/services/humanresources/occupationalhealthservice/jobhazardinformation/filetodownload,164407,en.doc) **document in order to do this.** | | | |
| International travel/Fieldwork  **To attend conferences & to present papers etc.** | X | 13. Substances to which COSHH regulations apply (including microorganisms, animal allergens, wood dust, chemicals, skin sensitizers and irritants) |  |
| Manual Handling (of loads/people) |  | 14. Working at height |  |
| Human tissue/body fluids (e.g. Healthcare workers, First Aiders, Nursery workers, Laboratory workers) |  | 15. Working with sewage, drains, river or canal water |  |
| Genetically modified Organisms |  | 16. Confined spaces |  |
| Noise > 80 DbA |  | 17. Vibrating tools |  |
| Night Working (between 2200 hrs and 0600 hrs) |  | 18. Diving |  |
| Display screen equipment (including lone working) |  | 19. Compressed gases |  |
| Repetitive tasks (e.g. pipette use, book sensitization etc) |  | 20. Small print/colour coding |  |
| Ionising radiation/non-ionising radiation/lasers/UV radiation | | 21. Contaminated soil/bioaerosols |  |
| 10. Asbestos and lead | | 22. Nanomaterials | |
| 11. Driving on University business (mini-  bus, van, bus, forklift truck etc) | | 23. Workplace stressors (e.g. workload, relationships, job role etc) | |
| 12. Food handling | | 24. Other (please specify) | |

Completed by Line Manager/Supervisor:

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| Name (block capitals) | Professor Djamila Ouelhadj |
| Date | December 2017 |
| Extension number | 6355 |

Managers should use this form and the information contained in it during induction of new staff to identify any training needs or requirement for referral to Occupational Health (OH).

Should any of this associated information be unavailable please contact OH (Tel: 023 9284 3187) so that appropriate advice can be given.