Research Associate – School of Engineering and Computing – Grade G

Job Description

Purpose

To work with Dr Ali Ghanbari on an EPSRC funded project to develop a biohybrid microrobotic system for drug delivery. As part of this project, a customised magnetic actuation system with imaging and tracking capabilities will be developed. The Research Fellow is to take responsibility for the provision of high-quality research and scholarly activity within agreed thematic areas. To contribute to external competitive grants and publish high impact, peer reviewed papers in collaboration with the team. The post-holder will participate in the training and dissemination of research with peers, undergraduate and postgraduate students and external agencies and organisations, as well as collaborate in the on-going supervision of postgraduate students. To contribute to the external esteem and international recognition of the research undertaken within the thematic areas.

Duties

1. To contribute to existing research projects, develop new projects in collaboration with the research group and to develop their own programme of research relevant to the values and ethos of the thematic areas.
2. To contribute and lead on the management of existing and future research/evaluation projects including the writing of research proposals/grant applications for external funding; writing documentation for ethics application; undertaking systematic literature reviews; performance and monitoring of projects, data analysis and preparation of detailed research/evaluation reports.
3. To supervise and coordinate activities of research staff employed to work on research/evaluation projects.
4. To disseminate outputs from research/evaluation projects through conferences. Seminars, courses and publications in high quality peer reviewed journals.
5. To contribute to and then lead the development of collaborative research/evaluation grant proposals.
6. To provide teaching support/presentations to undergraduate/postgraduate sessions, where relevant to research skills and interests.
7. To attract, support and contribute to the supervision of novice researchers and postgraduate research students (Masters and PhD Students).
8. To support existing links and foster new links with relevant external agencies and organisations and to help sustain and develop the work of the research group through research activities.
9. To contribute to the development of interdisciplinary research and scholarship across the School.
10. With regards to the nature of your role and its impact upon our students, make an active contribution to and support the improvement of the student experience.
11. To update specialist knowledge and understanding and translate this into research activity.

12. To support on-going activities of the research group through contributing to planning seminars, conferences and other external-facing activities.
13. Adhere to appropriate ethical and research governance standards for research and protect confidentiality throughout this work.
14. To engage in appropriate knowledge transfer activities.
15. Any other activities in line with the requirements of the role as determined by the Line Manager/ Dean of School.

Person Specification

Knowledge, Skills, and Behaviours (Essential)

- Substantial experience of research in microrobotics, magnetic actuation and image tracking demonstrated by a record of involvement in and responsibility for research management and related activities on a number of research/evaluation-based projects (Application/Interview).
- Experience of utilising qualitative and quantitative methodologies and a range of different research methods (Application/Interview).
- Record of academic peer reviewed publications/research reports (Application/Interview).
- Evidence of excellent organisation skills with proven ability to prioritise and meet deadlines with the framework of an agreed programme. (Application/Interview) (Application/Interview).
- PhD in mechanical engineering, electrical engineering or a discipline relevant to the post (Application).
- Excellent verbal communication skills (Application/Interview).
- Excellent IT and academic writing skills (Application/Interview).
- Ability to contribute to, develop, and lead the planning, co-ordinating and implementing of research skills (Application/Interview).
- Strong methodological skills evidenced by experience of qualitative and quantitative data collection and analysis (Application/Interview).
- Ability to contribute to publications and reports through excellent academic research writing skills (Application/Interview).
- Ability to work alone and carry out a arrange of research tasks autonomously and also to work as part of a team (Application/Interview).
- Ability to work independently and flexibly to ensure agreed work targets are achieved (Application/Interview).
- Commitment to conducting high quality research within the thematic areas (Application/Interview).
- Self-motivated and able to use initiative (Application/Interview).
- Flexible and enthusiastic approach to work (Application/Interview).
- An understanding of and demonstrable commitment to the University's Values of Common Sense, Compassion, Teamwork, Attention to Detail and Trust, as a framework for decisions, actions and behaviours (Application/Interview).

Knowledge, Skills, and Behaviours (Desirable)

- Experience of contributing to writing research grant proposals (Application/Interview).
- Sound skills in using Word, PowerPoint, Excel (Application/Interview).
- Ability to coach, mentor and support colleagues in developing research techniques (Application/Interview).
- Experience of using qualitative and/or quantitative software analysis computer programmes (e.g., MATLAB/Simulink, COMSOL, etc.) (Application/Interview).
- Track record of publications and experience of presenting research at conferences (Application/Interview).
- Ability to develop new concepts and ideas to extend intellectual understanding (Application/Interview).