Candidate Information

Position:	Research Fellow - Control Systems
School/Department:	School of Mechanical and Aerospace Engineering
Reference:	18/106768
Closing Date:	Tuesday 9 October 2018
Salary:	£33,199 - £39,610 per annum
Anticipated Interview Date:	Wednesday 17 October 2018
Duration:	Three years

JOB PURPOSE:

We are seeking a highly-motivated post-doctoral researcher in the field of control systems to join the Sir William Wright Technology Centre (W-Tech) at Queen's University Belfast. As part of the Centre, the researcher will support development of new powertrain control strategies for Next Generation Electric and Hybrid-Electric bus vehicles, supporting both fundamental modelling and on-vehicle validation studies in conjunction with partner Wrightbus. This post offers an exciting opportunity for someone with a passion for devising and testing new control algorithms to work with advanced vehicle applications and contribute to solutions for the next generation of urban mobility.

MAJOR DUTIES:

1. Development of powertrain control strategies suitable for deployment in hybrid-electric and electric bus configurations;
2. Participation in vehicle testing activities in conjunction with partner Wrightbus, both onsite at Wrightbus facilities and at testing sites in England, as required
3. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
4. Write up results of own work and contribute to the production of research reports, publications, presentations and proposals.
5. May contribute to introductory courses, for example, on the use of research methods and equipment.
6. Carry out undergraduate supervision/demonstrating/teaching duties under direction.
7. Carry out routine administrative duties as requested, e.g. arranging research group meetings.
8. Read and critically evaluate academic papers, journals and textbooks to keep abreast of developments.
9. Attend relevant conferences, seminars or training days.
10. Carry out any other duties designated by a line manager and which fall within the general ambit of the post.

Planning and Organising:
1. Plan own day-to-day activity within the framework of the agreed research programme.
2. Contribute to the planning of research projects, reports and publications etc.

Resource Management Responsibilities:
1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:
1. Liaise with research colleagues and support staff on routine matters.
2. Develop internal and external contacts to develop knowledge and understanding and form relationships for future collaborations with industrial partners and OEMs.
3. Attend and contribute to relevant meetings, conferences, seminars, etc.

ESSENTIAL CRITERIA:

1. Have, or are about to obtain, a PhD in Automotive, Mechanical, Manufacturing, Aerospace, Electronic, Physics, Applied Mathematics or a related discipline. For those applicants about to obtain a PhD, they must have submitted their intention to submit prior to the application deadline. Applicants who do not hold a PhD may also be considered for the post, but must clearly demonstrate in their CV substantial experience in conducting research in one of the above stated areas at a level equivalent to a PhD.
2. Have obtained a first or upper second degree or equivalent in Automotive, Mechanical, Manufacturing, Aerospace, Electronic, Physics, Applied Mathematics or a related discipline.
3. A minimum of three years' research experience in control system design, model predictive control, optimal control strategies or closely related.
4. A minimum of three years' research experience in control system design, model predictive control, optimal control strategies or closely related.
5. Excellent verbal and written communication skills.
6. Demonstrate experience of communicating with, developing and maintaining academic and/or industrial relationships.
7. Must be willing to work flexibility and travel to partner sites and testing sites across the UK as necessary.

DESIRABLE CRITERIA:
1. Experience of experimental implementation of control algorithms;
2. Experience in programming in MATLAB®, Simulink, C++, or similar high level language.
3. Experience of working in an automotive environment.
4. Current drivers licence and access to personal transportation.