Research Associate

Department: Computer Science
Hours of work: Full Time / 37 a week
Contract type: Fixed Term / 36 months
Salary: £32,817 - £40,322 a year / Grade 6
**Introduction**

You will be working as part of a team at the University of York on an Innovate project called Hi-Class (High-Integrity, Complex, Large, Software and Electronic Systems). Hi-Class is a highly-collaborative project featuring UK civil avionics companies, associated tool vendors and academic partners looking at the tools and techniques for the next generation of avionics systems. The work at the University of York has two main foci: model-based development; and the scheduling and timing analysis of distributed systems that use multi-core processors. Your post will be focused on the former. In particular, you will contribute to research and development of techniques and tools for collaborative reviewing and authorisation of heterogeneous models, and for activities such as bidirectional and reactive model synchronisation and consistency checking.

**Main purpose of the role**

- To conduct research under the supervision of senior colleagues and to contribute to the production of research
- To assist in the identification and development of potential areas of research and the development of proposals for independent or collaborative research projects

**Key responsibilities**

(Role holders will be required to undertake some or all of the duties below)

- To conduct individual and collaborative research projects, duties to include: analysis and interpretation of research data; use of appropriate research techniques and methods; writing up of research results and dissemination through publications, seminar and conference presentations and public engagement and outreach activities; contributing to the identification of possible new areas of research
- To contribute to the preparation of research proposals and applications to external bodies
- To undertake appropriate organisational and administrative activities connected to the research project, including conference organisation, and the development of promotional or educational material including website maintenance and development
- To develop and initiate collaborative working internally and externally, duties to include: the building of internal contacts and participation in internal networks; collaboration with colleagues on joint projects as required; participation in and identification of external networks in order to share information and identify potential opportunities for collaboration and possible sources of funding; attendance at and contribution to relevant meetings
- To provide guidance to other staff and students, as required, as well as coordinating the work of small research teams
- To assist with undergraduate teaching in own area of expertise
## Person specification

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<tr>
<th>Essential / Desirable</th>
<th>Qualifications</th>
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<tr>
<td></td>
<td>First degree in Computer Science</td>
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<td>PhD in Computer Science or equivalent experience</td>
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### Knowledge

- Good knowledge of the Java programming language (or a similar object-oriented language) to engage in high quality research | Essential |
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- Knowledge of version-control systems (e.g. Git) | Essential |
- Knowledge of Eclipse-based modelling technologies (e.g. EMF, Xtext) | Desirable |
- Knowledge of automated model management (e.g. model transformation, code generation) technologies | Desirable |

### Skills, abilities and competencies

- Strong object-oriented design and development skills | Essential |
- Highly developed communication skills to engage effectively with a wide ranging audience, both orally and in writing, using a range of media | Essential |
- Ability to write up research work for publication in high profile journals and engage in public dissemination | Essential |
- Ability to develop research objectives, projects and proposals for own and joint research, with the assistance of a mentor if required | Essential |
- Competency to conduct individual and collaborative research projects | Essential |
- Ability to identify sources of funding and contribute to the process of securing funds, with collaborators if required | Essential |
- Competency to make presentations at conferences or exhibit work in other appropriate events | Essential |

### Experience

- Experience of developing complex software using object-oriented technologies | Essential |
- Experience of carrying out both independent and collaborative research | Essential |
- Experience in writing high-quality technical documentation | Desirable |
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<tr>
<th>Ability to work as part of a team and also to work independently using own initiative</th>
<th>Essential</th>
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<tr>
<td>Experience of writing up research work for publication</td>
<td>Desirable</td>
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**Personal attributes**

<table>
<thead>
<tr>
<th>Attention to detail and commitment to high quality</th>
<th>Essential</th>
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<tr>
<td>Collaborative ethos</td>
<td>Essential</td>
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<td>Interest in and enthusiasm for the subject matter of the project(s)</td>
<td>Essential</td>
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<td>Positive attitude to colleagues and students</td>
<td>Essential</td>
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<td>Willingness to work proactively with colleagues in other work areas/institutions</td>
<td>Essential</td>
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<td>Ability to plan and prioritise own work in order to meet deadlines, including using initiative to plan research programmes</td>
<td>Essential</td>
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<tr>
<td>Commitment to personal development and updating of knowledge and skills</td>
<td>Essential</td>
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