# Candidate Information

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| **Position:** | Research Fellow Media Lab |
| **School/Department:** | Queen's Media Lab |
| **Reference:** | 23/111182 |
| **Closing Date:** | Monday 4 September 2023 |
| **Salary:** | £37,099 - £44,263 per annum |
| **Anticipated Interview Date:** | Wednesday 27 September 2023 |
| **Duration:** | Fixed term for 36 months |

## JOB PURPOSE:

Two Research Fellows will have the opportunity to join the MediaLab at Queen's, a vibrant new facility driving research activity to develop experiments and prototypes in the area of advanced media production. Depended on their expertise, the Fellows will also provide support for research in computer graphics & visualisation, human-computer interaction, image & vision computing, games technologies artificial intelligence.

The posts are critical roles to the MediaLab, and successful applicants will be ambitious team players who can embark on independent research, supervision, planning, outreach and collaboration both internally and externally.

Post holders will be hungry for knowledge and have the ability to understand new domains and emerging research quickly, building deep expertise with appropriate data, techniques and tools. Embracing the MediaLab's research culture, the post holders will apply high standards to the research plans they develop to create impact in emerging media and technology fields such as digital twins, extended reality, virtual production and the Metaverse.

Queen's University is a signatory to the UK Concordat to Support the Career Development of Researchers. As a PDRF at Queen's, you will be entitled to 10 personal career development days and have access to the University's Post Doctorial Development Centre.

## MAJOR DUTIES:

1. Undertake research under supervision within the specific research project and as a member of the collaborative research team contribute to develop 3D environments for visualisation and real time interaction and apply knowledge of relevant research domains along with expert coding skills to platform and framework development projects.
2. Develop/apply highly scalable algorithms based on state-of-the-art machine learning methodologies and design suitable human computer interaction user experimental studies.
3. Carry out analyses, experimental tests, critical evaluation and implementation, and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research across a range of platforms and facilities within the MediaLab.
4. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs.
5. In consultation with the project team, promote research milestones and outputs at national and international conferences and through social media (where applicable).
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
8. Undertake supplementary duties relevant to the success of the project including administrative duties, presentation of regular progress reports and additional training and development activities as required.

## ESSENTIAL CRITERIA:

1. 2.1 Honours Degree (or equivalent) in Physics, Applied Mathematics, Computer Science, Electronics, Electrical Engineering, or a closely related discipline.
2. Have or be about to obtain a PhD in Computer Science, Applied Mathematics, Electronics, Electrical Engineering, Physics (within 6 months).
3. Significant relevant research experience to include:
   • At least 3 years' experience in at least one of: intelligent systems, applied mathematics artificial intelligence, algorithms development.
   • Developing AR or VR systems.
   • Working effectively as part of a research team in the development and promotion of the research theme.
   • Unity debugging experience.
4. Demonstrable experience of:
   • How to optimise software (scripting languages, Java or Python or C# for specific headsets and platforms.
   • Proficiency in C++ programming.
   • Game Engines and editors.
   • Typical algorithms used in AI.
5. Ability to contribute to broader management and administrative processes.
6. Ability to assess and organise resources.
7. Ability to communicate complex information in English effectively in oral and written format to technical and non-technical audiences.
8. Ability to build relationships with a wide range of people and roles at different levels of seniority and to influence decision making.
9. Ability to manage self and prioritise workload.
10. A pro-active approach to work and team development.
11. Commitment to continuous professional development.

**DESIRABLE CRITERIA:**

1. Expertise in either AI/Maths in XR or GameTech/CG/HCI in XR.
2. Strong background in software application development.
3. Experience of the application of AI algorithms and software in multidisciplinary activities.
4. Experience of developing and testing novel algorithms.
5. Experience of media production technologies.