

Research Role Profile

Job Title:	Research Fellow A
-------------------	-------------------

Responsible to:	Head of research group, or principal investigator
------------------------	---

Responsible for:	Not applicable
-------------------------	----------------

Job Summary and Purpose:	
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.	

Main Responsibilities/Activities	
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>	

Research Role Profile

Person Specification

The post holder must have:

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

Special Requirements

To be available to participate in fieldwork as required by the specified research project

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
 - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
 - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

Research Role Profile

Addendum to Role Profile

Job Title:	Research Fellow
-------------------	-----------------

Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

Contribute to the EPSRC Prosperity Partnership in Future Personalised Object-Based Media Experiences led by the University of Surrey with the BBC and Lancaster University.

- (i) Lead research and develop novel methods for automatic understanding and reconstruction of real-world audio-visual scenes for transformation of video to audio-visual objects.
- (ii) Lead research to advance computer vision, audio analysis, machine learning and audio-visual AI for object-based audio-visual content capture, representation and neural rendering.
- (iii) Lead research in computer vision and audio-visual AI and implement software tools and libraries for use by researchers across the partnership, industry collaborators and open-source release.
- (iv) Lead and pro-actively engage with responsible and open research to ensure ethical, fair and inclusive design of computer vision, audio and AI technologies for personalised media experiences.
- (v) Initiate, plan and lead collaboration with other staff on the project to develop pilot and proof-of-concept systems for object-based capture, representation and neural rendering of personalised media experiences.
- (vi) Design and plan the development of tools and technologies to support object-based production of personalised experiences and support their use in production with industry partners and collaborators.
- (vii) Lead collaboration with other partnership researchers and creative professionals on the research, production and user evaluation of personalised media experiences.
- (viii) Work with other researchers on the partnership to develop research software libraries and systems to facilitate reproducible research and public engagement.
- (ix) Publish and present research in high-quality international journals and conferences.
- (x) Onsite collaboration with project partners as required to conduct research and integrate tools and technologies for personalised object-based media capture, production and delivery.
- (xi) Contribute to participative research engagement events and activities with stakeholders.
- (xii) Meet on a weekly basis with partnership staff, contribute to partnership meetings and present results at other sites as required.
- (xiii) Pro-actively organise and manage your own time and research-related activities.
- (xiv) Report orally and prepare papers reporting progress and delivery of project outcomes, and be able to communicate at both technical and high-level for example with project research partners.
- (xv) Perform any other duties associated with the project, as deemed appropriate to the grade by the Principal Investigator.

Promote the research and activities of the partnership and the Centre for Vision, Speech and Signal Processing (CVSSP) in national and international forums.

Research Role Profile

Main Responsibilities/Activities

- Lead and undertake research in computer vision, audio analysis, audio-visual AI and neural rendering for transformation of video to object-based representations.
- Lead the design, development and evaluation of novel deep learning approaches to automated audio-visual understanding of real-world dynamic scenes.
- Meet on a weekly basis on campus with CVSSP staff.
- Attend project meetings and present results at other sites as required.
- Lead collaboration with partners in design and development of tools, production, user-testing and evaluation of technologies for personalised object-based media experiences.
- Publish and present research in high-quality international journals and conferences.
- Give oral and written reports on project progress and outcomes. Report at both a technical low-level and conceptual high-level to a range of audiences including the public and industry.
- Lead the organisation, take part and deliver demonstrations of project progress and outcomes to a range of different audiences at events in-person and online
- Lead and pro-actively engage with open, responsible and inclusive AI research and data.
- Continually update knowledge and develop skills.
- Carry out routine administrative tasks associated with a specified research project, for example risk assessment of research tasks, organisation of project meetings and documentation. This will entail planning own day-to-day research activity within the framework of the agreed programme, dealing with problems that may affect achievement of research objectives and implementing procedures to ensure accurate and timely delivery.

Research Role Profile

Person Specification

The post holder must have:

The post holder must have:

- PhD degree in computer vision, audio, machine learning or a related subject
- At least 5 years post-doctoral research experience.
- Sustained track-record of publication in leading academic forums in computer vision, audio and/or machine learning (CVPR, ICCV, NeurIPS, PAMI, IJCV, SIGRRAPH)
- Experience in software development in topics such as computer vision, audio signal processing, machine learning, deep learning, and/or sensor systems.
- Experience of collaboration and technology transfer to partners outside academia.
- Ability to work independently or in a team, excellent organisation and time management.
- Excellent writing and communication for varying levels of technical/non-technical audience.

The post holder would ideally have:

- Skills and experience of development using languages such as Python and C++ with relevant computer vision, signal processing, machine learning and/or deep learning tools (TensorFlow, PyTorch, Keras, OpenCV etc.).
- Experience in securing funding for research in computer vision, audio or machine learning
- A track record of publishing academic papers, open-source software tools and/or datasets.

Relationships and Contacts

Direct responsibility to Principal Investigator Prof Adrian Hilton and Prosperity Partnership Research Stream Leaders. Informal enquiries are welcome and should be directed to Dr. Armin Mustafa a.mustafa@surrey.ac.uk