

Research Role Profile

Job Title:	Research Fellow (1A)
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Responsible to:	Prof Enzo De Sena, Music and Media, SAHCI, FABSS
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Responsible for:	Not applicable
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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
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. 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. Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity. 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. 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. The post holder may occasionally be required to supervise more junior research staff.

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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).

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.

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Role Purpose Addendum

This document provides additional information relating to both specific aspects of the post/faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Role Profile.

Job Title:	Research Fellow in Immersive Audio
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Background Information/Relationships

Note: This post will be offered on a fixed-term contract until 19 May 2027.

We are recruiting a postdoctoral research fellow who will work on a large-scale research programme on “Challenges in Immersive Audio Technologies (CIAT)” conducted in collaboration between the University of Surrey, King’s College London, and the University of Southampton.

About the Research Programme

Immersive technologies will transform not only how we communicate and experience entertainment, but also our experience of the physical world, from shops to museums, cars to classrooms. Despite significant progress in the computer vision community, long-standing fundamental challenges adversely impact on audio technologies, preventing immersion into realistic acoustic scenes in which the audience feels transported to an alternate reality. Specifically, state-of-the-art immersive audio technologies (a) suffer from computational requirements preventing real-time creation of shared, interactive immersive audio experiences, and (b) are limited in their ability to efficiently deliver shared, high-quality auditory experiences in 3D soundscapes to multiple listeners. CIAT’s vision is to transform the state of the art by developing a principled, scalable and reconfigurable framework for capturing and reproducing only perceptually relevant information.

The post-holder will work on the development of novel psychoacoustic-based spatial audio technologies for 3D sound reproduction, and on designing and carrying out relevant perceptual evaluations. The post-holder will join a team of eight other CIAT-funded Research Fellows and PhD students—two at Surrey, three at King’s College London and three at the University of Southampton.

The successful candidate will gain extensive opportunities for:

- Collaboration and networking between the three partner institutions and with external academic collaborators, stakeholders, and industry partners, including Stanford CCRMA (US), BBC (UK), Sonos (UK) and National Gallery (UK).
- Travel, including international conferences and workshops, as well as research visits at the partner institutions and Stanford CCRMA.

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- Access to state-of-the-art research facilities and resources, including (a) the ISVR-hosted anechoic chamber, (b) the IoSR-hosted ITU-BS1117 standard listening room with 22.2 system installed; or (c) the IoSR-hosted £2.2M National Strategic Infrastructure, AURORA³, currently being built and consisting of a full anechoic chamber with permanent loudspeaker array and a variable acoustics room capable of adjusting both wall absorption and room volume, a world-first.

Person Specification (Immersive Audio Reproduction)

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Role Profile.

	Essential/ Desirable
A PhD, or close to completion, in engineering, computer science or related area	E
Strong background in acoustics and/or psychoacoustics	E
Track record in relevant areas of audio signal processing	E
Strong publication record or emerging	E
Ability to work well on own initiative and as part of a team	E
Ability to work flexibly and respond proactively to project deadlines	D
Track record of research in immersive audio reproduction	D
Experience in developing and implementing new immersive audio reproduction methods	D
Track record of research in psychoacoustics and perceptual evaluations	D
Experience in designing and executing formal listening experiments	D
Strong programming skills	D
Experience of presenting research findings to diverse audiences	D
Special Requirements	Essential/ Desirable
N/A	

Key Responsibilities

This document is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities (5 to 8 maximum). This should

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be read in conjunction with those contained within the accompanying generic Role Profile.

Developing immersive audio reproduction technologies relevant to the project.

Designing and executing formal listening experiments.

Liaising with other research fellows and project partners in the process of building, testing, and refining the technologies.

Publish and disseminate your findings at top-tier journals and conferences in acoustics and signal processing.

Contributing to the impact activities of the project.

Working closely with the principal investigator to ensure that project deadlines are met.

Attend project meetings and knowledge exchange events where required.

N.B. The above list is not exhaustive.