

## Research Assistant - Hybrid Live

<b>Department:</b>	Computing, Ref 9132
<b>Grade/ Salary:</b>	Grade 6, £34,403.15 - £37,258.50 pro rata
<b>Contract Type:</b>	Fixed Term and part time over a duration of 18 months, 0.33 FTE
<b>Hours:</b>	12.5 hours per week, part time, flexible
<b>Location:</b>	New Cross, London

### Goldsmiths

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Goldsmiths, University of London is a world-leading centre of educational excellence where ground-breaking research meets innovative teaching and thinking. We're looking for inspiring and talented people to help build on our global reputation while also growing personally in a true learning organisation.

We are happy to supply information in alternative formats for disabled applicants. Please contact [hr@gold.ac.uk](mailto:hr@gold.ac.uk) to make your request.



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Together  
we are different

## **Department of Computing**

Goldsmiths Department of Computing is one of the UK's leading institutions for creative code, attracting the finest academics in the field, whilst producing world-renowned research in interaction, creativity and machine learning. Many of our staff have creative practices outside of, but frequently related to computing: they are musicians, artists, social activists, and writers. The work we do is significant on the world stage, published in the best journals and presented at the best conferences.

### **Job description**

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**Reporting to: Principal Investigator**

**Reports: Not applicable**

### **Summary:**

Hybrid Live is a collaboration between the Embodied AudioVisual Interaction (EAVI) unit at Goldsmiths and the Center for Computer Research in Music & Acoustics (CCRMA) at Stanford, in cooperation with cultural institutions Iklectik Art Lab (London) and SF Jazz (San Francisco). The project will mobilise advanced deep learning technologies and data visualization techniques in order to make remote, network based musical collaboration more fluid and ultimately musical for a broad range of musicians and music students. It will aid cultural institutions in music to respond to urgent issues raised by the COVID19 pandemic, and more generally broaden access and participation to live music. This will be made possible through an innovative hybrid of physically co-present and remote network musical performance, including a transatlantic connection between San Francisco and London.

### **The Hybrid Live has as its goals to:**

- Roll out technologies for low latency transmission of music over real world networks
- Create performance visualisation techniques to communicate musical intent
- Establish best practice for events such as concerts and lessons to take place over networks
- Deploy JackTrip and data loss recovery technology based on Deep Learning algorithms (provided by Stanford University)

- Create forms of musical social engagement using network transmission to open up access to and participation in music to new audiences.

### **Main duties:**

We seek a research assistant to join the team to develop new techniques for remote musical performance using low-latency network audio transports (JackTrip), and forms of data and avatar visualization (Unity). The work will involve audio signal processing and Ambisonic surround sound encoding using platforms such as Max, PureData, and SuperCollider.

The person would work with cultural partner (Iklectik Art Labs) to organise and stage hybrid gigs that are on site and online. After hours work will be required. They would also liaise with international partners Stanford CCRMA and SFJazz to organise user studies of remote network music playing.

They will configure live streaming audiovisual systems, multicamera control, capture cards and NDI interfaces.

They will be asked to write technical reports.

### **Person Specification**

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Detailed below are the types of qualifications, experience, skills and knowledge which are required of the post holder. Selection will be made upon evidence of best-fit with this criteria.

The Essential criteria sections show the minimum essential requirements for the post, therefore if you cannot demonstrate in your application you meet the essential criteria categorised below, you will not be invited to interview.

The Desirable criteria sections show additional attributes which would enable the applicant to perform the role more effectively with little or no training.

The Category column indicates the method of assessment:

**A = Application form      C = Certificate**  
**I = Interview                R = Reference**  
**T = Test / P = Presentation**

	<b>Category</b>
<b>Essential Criteria 1 – Qualifications</b>	
Undergraduate Degree in music, creative coding, or computing	A, C,
Postgraduate Degree in music, computational arts, or computer science	A, C
<b>Desirable Criteria 1 – Qualifications</b>	
PhD	A, C
<b>Essential Criteria 2 – Experience</b>	
Experience with live audiovisual performance	A, I
Experience with network streaming	
Experience organising gigs	
<b>Desirable Criteria 2 – Experience</b>	
Experience with NDI systems	A, I
Experience with Augmented Reality systems	A, I
<b>Essential Criteria 3 – Knowledge</b>	
C/C++ programming in Unity	A
Audio signal processing in Max, PureData	A
Data visualization techniques	
<b>Desirable Criteria 3 – Knowledge</b>	
Audio signal processing and programming in SuperCollider	A
Surround sound (Ambisonics) processing	A, I
<b>Essential Criteria 4 – Skills</b>	
Excellent communication skills	A, I
Working as part of a team	A, I
Graphics coding in OpenFrameworks	A, I
Development for VR headsets (Oculus, HTC Vive)	A, I
Computer vision including use of LIDAR and Kinect	A, I
VR development	A, I
Mobile Augmented Reality toolkit	A, I
<b>Desirable Criteria 4 – Skills</b>	

	A, I

**Please also note that where qualifications are required, employment is conditional on the verification of them. Qualifications (must be original documents) will be checked on the first day of appointment.**

For more information about the role, please contact Catherine Edlin Bellamy by e-mail [c.bellamy@gold.ac.uk](mailto:c.bellamy@gold.ac.uk)

**April 2021**

### **Summary of Benefits**

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If you choose to work with us, you'll become part of a learning organisation that is committed to professional and personal development, with a comprehensive and innovative staff development programme.

You'll also have access to frequent lunchtime and evening talks, seminars and performances, and annual performance and development reviews.

Our other benefits include:

- Competitive salary
- On-site cinema, Curzon Goldsmiths, with staff discounts and special screenings
- Remote working & working in Zone 2, with fantastic transport links and interest free travel to work loans
- Excellent annual leave entitlement plus additional closure days at Christmas and Easter
- Membership of LPFA pension scheme
- Access to exclusive discounts, including high street retailers
- Maternity, paternity, shared parental leave and adoption leave and pay and tax efficient childcare voucher scheme
- Contractual sick pay provision

- Free eye tests
- Wellbeing initiatives including the Chaplaincy and Staff Choir
- On-site [dining facilities](#)
- Access to [University of London facilities](#) such as Senate House Library

### **Further information**

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For more information about Goldsmiths, please visit: [www.gold.ac.uk/about](http://www.gold.ac.uk/about).

We can supply information in alternative formats for people with a visual impairment or dyslexia. For this please contact [hr@gold.ac.uk](mailto:hr@gold.ac.uk), or visit [www.gold.ac.uk/hr](http://www.gold.ac.uk/hr).

***Thank you for your interest in working with us, we wish you all the best with your application.***