

# CENTRE FOR PERFORMANCE SCIENCE

Research Associate in Performance Science

Job reference number: 501-17

## Job Description

Post Title	Research Associate in Performance Science
Grade	8
Responsible to	Head of the Centre for Performance Science
Responsible for	N/A
Liaises with	<p><b>Internal</b> Centre for Performance Science team and, in particular, RCM staff on the TELMI project</p> <p><b>External</b> Biologically Inspired Computer Vision (BICV) Group, Imperial College London and external TELMI project partners</p>

## Overall Job Purpose

The Research Associate in Performance Science will undertake research within the Centre for Performance Science (CPS), working closely with the Department of Bioengineering at Imperial College London. The post-holder will conduct research on the European Commission-funded TELMI project (Technology Enhanced Learning of Musical Instrument Performance).

## Main Duties & Responsibilities

These include:

### Research activity

- Working with the TELMI project team to design research protocols and collect and analyse data; this includes designing and optimising performance capture technology (including motion capture, audio capture and video capture)
- Working with the TELMI team to analyse performance data and to disseminate research through reports and, as appropriate, peer-reviewed publications and conference presentations
- Undertaking self-supervised scholarly activity in the areas of computer vision and machine learning as agreed with the Head of the Centre for Performance Science and the Reader in Image Analysis (Imperial)
- Collaborating with other CPS colleagues in relevant research and, where appropriate, support colleagues in their research
- Contributing to external funding bids for research projects

## External links and updating

- Establishing and maintaining contact with those researching in related fields, across the RCM and Imperial as well as the international research community

## Other duties

- Undertaking such other duties as may be requested by the Head of the Centre for Performance Science and the Reader in Image Analysis (Imperial)

## Nature & Scope of Job

TELMI (Technology Enhanced Learning of Musical Instrument Performance) is an international project funded by the European Commission's Horizon 2020 Research and Innovation action. It is a 36-month project which started on 1 February 2016. The partner institutions involved are: Universitat Pompeu Fabra, University of Genova, Royal College of Music, Highskillz, and SAICO Intelligence, S.L.

The general objectives of TELMI are:

- To design and implement new interaction paradigms for music learning and training based on state-of-the-art multi-modal (audio, image, video and motion) technologies.
- To evaluate the pedagogical efficacy of such new paradigms.
- Based on the evaluation results, to develop new multi-modal interactive music learning prototypes for student-teacher, student only, and collaborative learning scenarios.
- To create a publicly available reference database of multi-modal recordings for online learning and social interaction among students.

The post-holder will join the project in its final 18 months, from 1 August 2017 to 31 January 2019, helping the RCM in implementing a work package testing the pedagogical and technical efficacy of the first-stage prototypes, guiding further development of the technologies, and exploring potential for further research and application of the component systems.

More information on TELMI can be found at [www.performancescience.ac.uk/TELMI](http://www.performancescience.ac.uk/TELMI).

## Special Factors

The nature of this role may necessitate some evening and weekend work. It may also necessitate international travel.

## Person Specification

Applicants should demonstrate how their qualifications, experience, skills and training fit each of the elements highlighted in this section.

Criteria	Description	Essential/ Desirable	How Criteria Are Tested
<b>Qualifications</b>	PhD (or equivalent work experience) in a relevant subject	Essential	AF
<b>Experience</b>	Track record as a researcher in Performance Science, Computer Vision, or related field	Essential	AF, CV
	Experience in the collection, processing, and analysis of audio, video, and/or motion-capture performance data	Essential	AF, CV
	Experience in, or possessing a keen understanding of, music performance	Essential	AF, INT
	Proven ability to work on large-scale research projects, with experience of research design and analysis	Desirable	AF, CV
	Proven ability to produce high quality publications/reports and other forms of dissemination, including experience of presentation at national/international conferences	Desirable	AF, CV
	Excellent computer programming skills	Essential	AF, CV
<b>Personal Attributes</b>	Ability to think analytically and strategically, with well-developed interpersonal and team working skills	Essential	AF, INT
	Ability to identify opportunities for research funding and to prepare/contribute to the preparation of high quality research bids	Desirable	AF, CV, INT
	Ability to work diligently and independently, and achieve objectives	Essential	AF, INT

AF = Application Form   CV = Curriculum Vitae   ST = Selection Test   INT = Interview

The Royal College of Music is an Equal Opportunities employer. The College is a non-smoking environment.

The duties and responsibilities assigned to the post may be amended by the Head of the Centre for Performance Science within the scope and level of the post.

Professor Aaron Williamon  
 Head of the Centre for Performance Science  
 8 March 2017