

**Senior Research Associate, TROMPA H2020 European  
Research Project**

<b>Job Reference:</b>	420209
<b>Department:</b>	Computing
<b>Grade/ Salary:</b>	Grade 7/8 £39,306 to £53,013 including London weighting
<b>Contract Type:</b>	Fixed term
<b>Hours:</b>	Full time
<b>Location:</b>	Remote working, New Cross

Closing date for applications: **6<sup>th</sup> July 2020**

Interviews: **Week commencing 13<sup>th</sup> July 2020**

**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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## Department of Computing

The Department of Computing is renowned nationally and internationally for its interdisciplinary research from a strong base in computer science. In the 2008 research assessment exercise, 20% of our submission was judged world-leading and 40% internationally excellent. The panel stated that the "inter-disciplinarity of the submission is strongly commended and contributes substantially to the diversity of UK research in this area." They went on to say that our outputs "demonstrated a body of research of a quality that is internationally recognised, internationally excellent and in a significant proportion of cases, world leading." Our research environment was described as "substantially of internationally excellent quality" and it was noted that "the strategic focus on the creative industries ... contributed in very large part to a vital, sustainable and credible submission."

For more information about the Department of Computing please visit:

[www.gold.ac.uk/computing](http://www.gold.ac.uk/computing)

### Job description

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Reporting to: Senior Research Associate

### Summary:

The UK team of the EU Horizon 2020-funded TROMPA project (<http://trompamusic.eu>) seeks a full-time Senior Research Associate with excellent technical (computational) skills and a background in musicology to develop and publicise music-research use-cases and/or investigations based on TROMPA tools and resources. The RA will be

employed for 10 months (with likely extension of 2 months) at Goldsmiths under the supervision of TROMPA's UK Principal Investigator, Prof. Tim Crawford, although remote working is envisaged for the duration of the current worldwide COVID-19 crisis.

Your work will form the basis for online demos and normal scholarly dissemination; a further important part of your duties, in the current crisis, is to ensure that the online communication and interaction facilities of TROMPA are experienced by an expanding worldwide community of 'music scholars' (in the broadest sense). For this reason, an active understanding of, and experience in, the use of social media and online resources for public engagement and scholarly discourse is essential for the post.

The other important qualification is a sophisticated understanding of the nature of musical data, its encoding and its processing. Visualisation and evaluation of research results will also form an important element of your work, as will clear reporting of their significance in scholarly writing.

TROMPA maintains a database of links to public-domain music-score/audio resources with a powerful faceted internal search facility. Using metadata queries, specific bodies of music data can be summoned for further processing within the TROMPA environment, or as external tasks. Much of the TROMPA score data originates from optical music recognition (OMR) carried out on score page-images, and this brings its own range of characteristic types of error; subsequent processing needs to be aware of this.

The aim of your post is to provide a number of examples of how scholarly investigations may be carried out by such means, taking advantage of TROMPA's internal methods and its ability to link outwards to external resources on the web. These will be aimed (in terms of readership) above all to musicologists, music students and others who do not necessarily have advanced computer skills.

These musicological use-cases should take advantage of the various technologies brought together within the TROMPA project. These include ground-breaking work on music audio processing, choral singing and voice synthesis, optical music recognition (OMR), music information retrieval (MIR), score-display and annotation, piano performance comparison and assessment, social interaction with large communities of musical experts, performers or enthusiasts, and several other technologies. The initial existing two TROMPA use-cases from which your work stems involve contrasting repertoires: Mahler's symphonies (in particular, the 4th, the subject of an online annotation project within TROMPA) and 16th-century vocal music and its instrumental

arrangements; you may choose to extend either of these or to investigate new repertoires with your own ideas.

You will report to and work with the Principal Investigator on the TROMPA project, Prof. Tim Crawford, in addition to working closely with the other project partners. You will work closely with Prof. Crawford and a dedicated programmer in devising, implementing and testing ways in which the potential for musicology of the TROMPA environment and its tools might be exploited. The resulting use-cases will be presented in the form of technical and scholarly reports, conference presentations and other publications, with working web-based demonstrations where possible.

**Main duties:**

- Research
  - a. Thorough familiarisation with the techniques enabled in the TROMPA environment
  - b. Devising new use-cases to demonstrate the potential of TROMPA for musicology
  - c. Selection of, and where necessary, gathering, extra public-domain musical scores (and recordings if needed) for use in the research
  - d. Preparation of scores as machine-readable encodings (MEI), using OMR technology as necessary, or conversion from other formats (MIDI, MusicXML, etc.); data-cleaning
  - e. Running of analytical or other music-content-based routines on the encoded scores
  - f. Evaluation of results, based where possible on comparison with traditional findings from the scholarly literature
- General research and dissemination:
  - a. Contribution to writing and presentation of conference research papers
  - b. Submission of regular internal and public reports to TROMPA blogs, newsletters and website
  - c. Co-organisation (with Prof. Crawford) of a Music Scholars workshop in the final months of TROMPA
- Additional Responsibilities
  - a. In addition you will be required to undertake any other duties as may reasonably be required

- b. At all times to carry out your responsibilities with due regard to the College Code on Equality and Diversity / Dignity at Work Policy
- c. At all times to help maintain a safe working environment by attending training as necessary and following the College's Health and Safety Codes of Practice and Policy

## 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>	
A PhD in a musical discipline, or in computer science with a demonstrable musicological or historical aspect	A, C, I

<b>Essential Criteria 2 - Experience</b>	
Music notation software (MuseScore, Lilypond, Verovio)	A, I, R
Use of social media for public engagement and dissemination of scholarship	A, I, R
<b>Desirable Criteria 2 - Experience</b>	
Some understanding of methods of web frontend development (HTML, CSS)	A, I, R
Programming languages, etc (Javascript, Python, SVG)	A, I, R
<b>Essential Criteria 3 – Knowledge</b>	
Understanding of music representation and processing (MIDI, MusicXML, MEI, Humdrum, Music21)	A, I, R
<b>Desirable Criteria 3 - Knowledge</b>	
Basic statistics and visualisation software (Excel, R)	A, I, R
<b>Essential Criteria 4 - Skills</b>	
Excellent oral and written communication skills	A, I, R
Excellent interpersonal skills	A, I, R
Ability to prioritise and organise your own workload while having multiple concurrent projects	A, I, R
<b>Additional Attributes 5</b>	
A high degree of initiative and the ability to be largely self-motivated	A, I, R

**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 Bellamy, e-mail [c.bellamy@gold.ac.uk](mailto:c.bellamy@gold.ac.uk).

**June 2020**

## 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
- 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 USS or LPFA pension scheme, dependent upon grade
- 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](#) and [gym](#)
- 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.***