POSITION DESCRIPTION

Position Title: Computer Programmer

Organisation Unit: School of Music

Position Number: NEW

Type of Employment: Part-Time, Fixed Term for 2 years

Classification: HEW Level 7

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (45), the US News Best Global Universities Rankings (52), QS World University Rankings (51), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index; and secured a greater share of Australian Research Council grants in 2016 ($24.5 million) than any other university nationally.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience –the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 230,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.7 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.
UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim going forward.

Organisational Environment

The Faculty of Humanities and Social Sciences (HASS) is a large comprehensive Faculty with a broad academic profile and substantial research achievements. The Faculty Office is based at the St Lucia campus in the iconic Forgan Smith building adjacent to the Great Court of the University. The current Executive Dean is Professor Julie Duck who is Acting in the role following the transition of Professor Tim Dunne to a Pro-Vice-Chancellor position in the Office of the Provost.

The Faculty comprises seven Schools (Communication & Arts; Education; Historical & Philosophical Inquiry; Languages & Cultures; Music; Political Science & International Studies; Social Science), two research Institutes (Institute for Social Science Research; Institute for Advanced Studies in the Humanities), two museums (Anthropology Museum and the RD Milns Antiquities Museum), a new Faculty Centre for Policy Futures, and several school-based research centres. The Faculty is also host to the Institute for Modern Languages and the Confucius Institute. The Faculty offers a broad range of programs to a large cohort of international and domestic students, with 850 research higher degree students, approximately 1,500 students in postgraduate coursework degrees and close to 8,000 undergraduates.

There are over 300 academic staff across the Faculty, making it one of the largest in Australia. One indicator of the Faculty’s standing in the disciplines that we research is membership in the learned academies, where UQ can proudly claim 33 members of the Australian Academy of the Humanities and 50 members of the Academy of Social Sciences in Australia.

Teaching in the Faculty is underpinned by substantial research performance and several specialized fields of research were judged at the highest level (5 ranking) in the 2015 Excellence in Research Australia (ERA) round. These fields include Specialist Studies in Education; Political Science; Cultural Studies; Literary Studies; History and Philosophy of Specific Fields. Overall, HASS returned outputs to 21 disciplinary field codes, where 90% were rated above (4 ranking) or well above world standard (5 ranking). This is indicative of high quality and capacity in research.

These research achievements internationally are reflected in the 2017 Leiden rankings (based on impact, not reputation), where the Humanities and Social Sciences at UQ ranks 16th in the world on the quantum of publications in ranked journals, placing us first in Australia and in the Oceania region (for the full data-set see http://www.leidenranking.com).

The quality of our overall Faculty’s performance is also evident in the QS World University Rankings for 2017 which places Social Sciences/Management at UQ at 39th in the world, and Humanities at 50th in the world. This data can be accessed at: http://www.topuniversities.com/faculty-rankings.

More information about the Faculty can be accessed at http://www.hass.uq.edu.au/.

The School of Music enjoys a vibrant musical culture with a strong collaborative focus. It has a long-standing reputation for excellence in its chamber ensembles in residence, good
relationships with contemporary composers, publication of world-class music research, excellence in teaching, and engagement with the music industry.

The School is selective in its intake though broad in capacity, providing programs to PhD level in Music Performance, Composition, Musicology, Music Technology and Popular Music, Music Psychology, and Music Education. Students perform in chamber ensembles as well as the UQ Symphony Orchestra, UQ Chorale and UQ Winds. Alumni hold positions in national and international ensembles and orchestras, have won prizes and awards for their recordings and performances and hold positions at major research universities throughout the world.

The School hosts The Creative Collaboratorium, a funded multi-disciplinary research forum for dialogue, collaboration and creativity within and beyond the disciplines of music. The School also leads the Translational Research in Creative Practice research group which explores the role of creative practice in creating and communicating new knowledge within and across disciplinary boundaries.

The Head of School, Professor Margaret Barrett has served as President of the International Society for Music Education (2012 – 2014), Chair of the World Alliance for Arts Education (2013 – 2014), Chair of the Asia-Pacific Symposium for Music Education Research (2009 – 2011), an elected member of the Board of the International Society for Music Education (2008 – 2010), and National President of the Australian Society for Music Education (1999 – 2001). Currently she is a Director of the Australian Music Centre (AMC) and the Queensland Symphony Orchestra and a member of the advisory board of the Australian Music Examinations Board (AMEB).


Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

DUTY STATEMENT

Primary Purpose of Position

To provide research support for Chief Investigators Dr Denis Collins (University of Queensland) and Dr Jason Stoessel (University of New England) for their Australian Research Council project The Art and Science of Canon in the Music of Early 17th-century Rome (DP180100680).

Duties

Duties and responsibilities include, but are not limited to:

Research

- Under the direction of the Chief Investigators (CIs), the management, development, debugging and testing of computer-assisted analysis tools.
- Development of tools or scripts for the analysis of encoded music notation data using statistical methods, segmentation algorithms, clustering algorithms and other 'Big Data' approaches.
- Enhancement of the Aruspix OMR (Optical Music Recognition) tool for extracting additional encoded music data from early 17th-century music editions of canons.
• Enhancement of the Verovio MEI (Music Encoding Initiative) Viewer for encoded repertoire specific to the project.
• Preparation of analysis scripts for the project’s associated web site.
• Documentation of new features and tools.

Other
Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:
• the University’s Code of Conduct.
• requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School.
• the adoption sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures.
• requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University.

Organisational Relationships
The position reports to the Chief Investigator, Dr Denis Collins, School of Music.
SELECTION CRITERIA

Essential

- Completion of an undergraduate degree in Computer Science or in a related field with strong programming training, or an equivalent combination of relevant experience and education/training.
- Demonstrated knowledge, application and testing of C++, Java, Ruby and Python computer programming languages and associated compilers and standard libraries.
- Ability to work with Music21 (coded in Python), R and other statistical software toolboxes.
- Knowledge of music encoding standards MEI (Music Encoding Initiative), MusicXML and general principles of extensible markup languages.
- Initiative in solving complex problems with computers.
- Experience in working with a software development team and associated Agile software development methodology and workflow.
- Extensive project management experience and demonstrated ability to produce documentation and reports.
- Experience in the use of online source code repositories and project management software.
- Excellent interpersonal skills in interacting with CIs by telephone, video communication, email and in person.
- Ability to prioritise own workload, work independently and meet deadlines.

Desirable

- Basic knowledge of music terminology, notation and historical framework.
- Demonstrated knowledge and application of machine learning and/or artificial intelligence applications in computer-assisted problem solving.
- Experience in web site development using the Ruby on Rails framework
- Experience with OMR technology.

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University’s Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.