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Downloaded On: Nov. 23, 2024 8:30am Posted Oct. 23, 2024, set to expire May 6, 2025

Job Title Research Fellow/Research Associate (Active Noise

Control)

**Department** School of Electrical and Electronic Engineering

**Institution** Nanyang Technological University

Singapore, , Singapore

Date Posted Oct. 23, 2024

Application Deadline Open untill filled

Position Start Date Available Immediately

Job Categories Research Scientist/Associate

Academic Field(s) Electrical and/or Electronics

Computer Engineering Engineering - Other

Job Website https://ntu.wd3.myworkdayjobs.com/Careers/job/NTU-

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**Job Description** 

The School of Electrical and Electronic Engineering is one of the founding Schools of the Nanyang Technological University. Built on a culture of excellence, the School is renowned for its high academic standards and research. With more than 130 faculty members and an enrolment of more than 4,000, of



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which close to 1,000 are graduate students, it is one of the largest EEE schools in the world and ranks 10th in the field of Electrical & Electronic Engineering in the 2024 QS World University Rankings by Subjects.

We are looking for a Research Fellow/Research Associate who will be responsible to lead the effort to translate high-level audio algorithms implemented in other audio prototyping software into a high-performance, architecture-specific code and will work closely with other researchers to design and implement DSP algorithms that meet system-level constraints. The Research Fellow/Research Associate will also be defining and implementing software architecture for real-time audio systems on prototype hardware containing a multitude of co-processors.

### **Key Responsibilities:**

- Writing, debugging, optimizing and testing of source code with an emphasis on audio applications
- Maintenance and improvement of existing audio algorithm code base including noise reduction, acoustic echo cancellation, automatic gain control, voice activity detection, packet loss compensation and other audio enhancements
- Supporting Research and Feasibility Studies including defining the scope and goals of audio research tasks and completion of detailed reports on results and recommendations for development activities
- Software development of new algorithmic audio processing solutions including the existing areas mentioned above and additionally including state of the art audio codecs, audibility and intelligibility enhancements, microphone array processing, noise control, 3D audio and other audio effects and enhancements



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Project management tasks including creation and maintenance of requirements and schedule documentation for assigned projects, project budget etc.

- Publish journal and conference papers as dictated by the assigned projects.
- Provide guidance of PhD/Master/undergrad students.

### Job Requirements:

- PhD/Masters in Electrical and Electronic Engineering/Computer Engineering field
- More than 1-2 years research experience in related area
- Strong audio signal processing fundamentals (for example, Fourier analysis, transfer functions, filtering, linear algebra, matrix algebra etc)
- Perform independent research and development of emerging and future audio technologies
- Experience conducting acoustic measurements using standard acoustic equipment (speakers, microphones, anechoic chambers, acoustic mannequins)
- Ability to communicate findings and ideas to other teams and to management using both written documents and Keynote presentations
- Ability to effectively contribute in a fast-paced, cross-functional environment
- Preferred experience with spatial audio and HRTFs, acoustic room modeling, collecting,



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organizing and analyzing large data sets.

- Experience with speaker or microphone arrays, or machine learning is a huge plus
- Proficiency in basics of programming languages such as C, C++ and Python
- Excellent communication skills. (Both written and verbal)

We regret that only shortlisted candidates will be notified.

#### **Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

#### Contact

Singapore