



National Astronomical Research Institute of Thailand (Public Organization)
Announcement
Recruitment of a Contract Employee

The National Astronomical Research Institute of Thailand (NARIT), a Public Organization, stands as the foremost research institution in Thailand, overseeing world-class observing facilities such as the Thai National Observatory (TNO) housing the 2.4 m Thai National Telescope (TNT), the Thai Southern Hemisphere Telescope (TST), the Thai Robotic Telescope Network (TRT), Regional Observatories for the Public, and the Thai National Radio Astronomy Observatory (TNRO). Among the radio telescopes at the TNRO site, the 40 m Thai National Radio Telescope (TNRT) is the focus of the wide radio frequency range signal reception systems development project. The primary objective of this project is twofold: first, to design and develop a system capable of receiving wide-frequency signals in the C-band receiver, VGOS receiver, and other frequency bands; and second, to create accessories, both passive and active devices, for the establishment of signal reception systems and high-frequency technology. Additionally, the project aims to develop a supercooling system to advance signal reception systems in various radio frequency ranges, simultaneously reducing reliance on foreign technology and imports.

Furthermore, the development's focal point is to craft a signal reception system tailored for the national radio telescope. The step-by-step process involves designing the workpiece, simulating engineering results, high-frequency circuit design, RF UP-Down Converter system, and control system, followed by assembling the workpiece and testing signal reception. The final step includes installing a signal reception system at the radio telescope.

Given the aforementioned reasons, the development of the signal reception system necessitates the hiring of skilled engineers with expertise in electrical circuit design, engineering electronics, telecommunications, or high-frequency engineering. These individuals will be entrusted with the responsibility for the aforementioned tasks.

- 1. Qualifications and responsibilities are as an annex attached**
- 2. Date and time of application and application process**

2.1 Applicant can apply **within 15 March 2024(Fri), 16:59 UT** by one of the following channels via;

Website; <https://jobs.narit.or.th/>

Email; personnel@narit.or.th, Koichiro@narit.or.th,

Koichiro.sugiyama@gmail.com

Post; addressed to

Human Resource Management Department (please refer to Job Application)

National Astronomical Research Institute of Thailand (Public Organization)

260 Moo 4, Donkaew, Maerim, Chiangmai, 50180 – Thailand

2.2 Interview (online) : If necessary, in 18-22 March 2024

2.3 Due of selection announcement : 26 March 2024 (Tue)

2.4 Offer starting date : Immediately, negotiable

3. Required document

3.1 Cover letter with the foreseen starting date and the contact

3.2 Curriculum vitae; including skills/experiences as well

3.3 Certificate of Bachelor's or Master's degree

3.4 Copy of ID card or passport

4. Employment period

The contract is valid for one fiscal year and is extendible on a yearly basis.

Announce on : February 21, 2024



Saran Poshyachinda, Ph.D.
NARIT Executive Director

**Annex of National Astronomical Research Institute
of Thailand (Public Organization) Announcement
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Position title: RF Engineer 1 Position

Affiliation: Division for Radio Observatories Operations and Engineering

Employment period: from start date until 30 September 2024, and will be extendible

Salary: 22,000 – 35,000 Bath/month (potentially to be raised at the beginning of each fiscal year)

Work location: NARIT headquarter, Chiangmai, Thailand

The duties of the proposed position are listed below:

1. Design electronic circuits and sketch circuit patterns on printed circuit boards (PCB Design). Develop high-frequency amplifier circuits, frequency converter circuits (Up-down converter), and electronic control system circuits.
2. Arrange the necessary equipment and tools for manufacturing printed circuit boards, including SMD, SMT, QFN, RF components, etc.
3. Design and simulate structures for analyzing electromagnetic wave properties.
4. Mount SMD, SMT, QFN, RF-component electronic devices onto the printed circuit board. Conduct measurements and testing on workpieces, and report the results.
5. Assemble workpieces to construct a prototype signal receiving system. Install and maintain the signal receiver system using the prototype.
6. Analyze signals, formulate circuit conclusions, and design the workpiece accordingly.
7. Compile reports, various documents, and present progress reports related to research projects within their assigned area.
8. Fulfill other assigned tasks such as procuring materials, equipment, and coordinating with various external agencies, among other responsibilities.

Skills/Qualifications

The candidates are to have the following qualifications in possession:

1. Possess a bachelor's degree or higher in Electrical Communication Engineering, Electronics, Physics, Science, or related fields.
2. Age should not exceed 40 years, and both male and female candidates are welcome.
3. Demonstrate fundamental knowledge in telecommunications engineering, particularly in electromagnetic waves, with expertise in constructing telecommunication circuits and designing circuits within the high-frequency spectrum. Proficiency in creating circuit patterns on printed circuit boards is essential. Consideration will be given to candidates with a minimum of 1 year of experience using the Altium program or designing electronic circuits involving devices like SMD, SMT, QFN, RF-components.
4. Experience with structural simulation programs for electromagnetic wave analysis, such as Ansys Electronic Desktop (HFSS), CST Studio Suite, or PathWave Advanced Design System (ADS), is preferred. Familiarity with Ansys Electronic Desktop (HFSS) is an added advantage.
5. Possess knowledge and understanding of electrical circuit design and testing, specifically in radio frequency, telephone signal, or high-frequency microwave areas. Ability to design circuits like high-frequency feed horn circuits, frequency filter circuits, Up-Down converter circuits, signal generator circuits (Local oscillator), etc.
6. Proficient in using measuring tools such as Oscilloscope, signal generator, spectrum analyzer, or Network Analyzer.
7. Demonstrate proficiency in listening, speaking, reading, and writing English.
8. Willingness and ability to work in other provinces or abroad.