National Astronomical Research Institute of Thailand (Public Organization)

Announcement

Recruitment of a Contract Employee

National Astronomical Research Institute of Thailand (NARIT, Public Organization) is the leading research organization in Thailand that operates the world-class observing facilities: Thai National Observatory (TNO) with the 2.4 m Thai National Telescope (TNT), Thai Southern Hemisphere Telescope (TST), Thai Robotic Telescope Network (TRT), Regional Observatories for the Public, and **Thai National Radio Astronomy Observatory (TNRO)**. One of radio telescopes at TNRO site is **the 40 m Thai National Radio Telescope (TNRT)**, which is the largest radio telescope in South-East Asia and the 1st Call for Proposals in cycle 0 with the L-band receiver was achieved in Oct-Nov 2023 at the end (https://indico.narit.or.th/event/197/).

Which is affiliated with **Thai National Radio Astronomy Observatory (TNRO) project**.

 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, spiro@narit.or.th

   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 14, 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: Digital Signal Processing Engineer 1 Position

Affiliation: Radio Group in NARIT

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

Job Description and Key Responsibilities

We are seeking a skilled Digital Signal Processing Engineer to join our dynamic team. The ideal candidate will have a strong background in digital signal processing and FPGA development, contributing to the design and implementation of signal processing algorithms on FPGA platforms. The applicant will improve the current radio astronomy receiver systems and develop future projects in Thai National Radio Astronomy Observatory. In particular, the candidate will contribute to the 40-m TNRT as working for the backend system: Pulsar mode and CXKu-band digitizer system, etc. For this, he/she will be in charge of

The duties of the proposed position are listed below:

1. Design, develop, and implement signal processing algorithms on FPGA platforms or relevant platforms.
2. Collaborate with cross-functional teams to understand system requirements and translate them into FPGA design specifications.
3. Conduct simulation, verification, and testing of FPGA designs to ensure functionality and performance goals are met.
4. Optimize FPGA designs for speed, resource utilization, and power efficiency.
5. Troubleshoot and debug FPGA designs, identifying and addressing performance bottlenecks or issues.
6. Stay updated with the latest FPGA or DSP technologies, tools, and methodologies to enhance design processes.
7. Document design specifications, test procedures, and results.

Skills/Qualifications

The candidates are to have the following qualifications in possession;

1. Experience with high-speed digital design and integration.
2. Knowledge of MATLAB, Simulink, or other simulation tools.
3. Understanding of hardware-software co-design principles.
4. Familiarity with communication protocols and hardware interface (e.g., TCP/UDP, PCIe, etc.).
5. Field Programmable Gate Array (FPGA)

    5.1 Graphic Processing Unit (GPU)

    5.2 Software Defined Radio (SDR)

    5.3 Design / analyze radio frequency (RF) systems

    5.4 RF Test and measurement equipment (Spectrum Analyzer, Power Meter)