STFC – NARIT Newton Fund workshop

21 – 23 October 2019
Astronomy Technology Centre, Edinburgh
Workshop Objectives

• Bring Thai (NARIT) and UK astronomy research communities together to share and understand the drivers for Thailand in astronomical research, big data analytics and STEM outreach.

• Launch a third STFC/NARIT Newton Fund call.

• Initiate further collaborations between UK and Thai research communities to apply for funding.

• Day 2 – to engage with potential partners and develop research proposal ideas
Agenda – day 2 Tuesday 22 October

• 09:15hrs – recap and plan for day, Q&A
• Break out sessions during the day
• Refreshments – 11am, 3:30pm
• Lunch – 1pm
• Use main room, plus coffee area upstairs and small room next to coffee area.
• Morning breakout sessions - Tours of Astronomy Technology Centre
• Afternoon breakout sessions - optional Tour of Crawford Library
• Update session on Official Development Assistance compliance – part of case for support
• Reconvene – short feedback session

• 18:00 Taxis back to accommodation

• 19:00hrs - Dinner in same building as Monday – different room, wine!
Priority themes

• Astronomical Instrumentation

Thailand is currently focusing on astronomical instrumentation development as it is crucial for the country to be self-reliant and sustainable on technology development. In the past decade, there has been an increasing demand for astronomical instrumentation in the country, particularly in the fields of optical and radio astronomy.

Given that Thailand relies heavily on the importation of technologies, the country is on the verge of losing its competitiveness in technology development in the global arena if this trend persists. Making technology development within the country more relevant and accessible is crucial to enabling innovation and helping to create a knowledge-based society.
Priority themes

• Big data analytics

Big Data Analytics is significant in modern-day astronomy as now it is possible to work with massive data volumes (terabytes to exabytes). Extremely large data volumes pose major challenges for how astronomers work nowadays as these data require much-sought-after knowledge and tools for capture, cleaning, curation, integration, storage, processing, indexing, search, sharing, transferring, mining analysis and visualisation. Traditional tools have become obsolete to tackle the volume of data, whilst new technologies require a skilled workforce who are capable of managing and manipulating this scale of data to good use.

NARIT has set up its high performance computing cluster called Chalawan in recent years, which is one of the fastest clusters in the country. However, with a growing demand for Big Data Analytics and its applications in Thailand, the challenges of capacity building and knowledge transfer need to be met with appropriate development programmes and facilities to empower the growing workforce in Big Data Analytics in Thailand.
Priority themes

• Outreach to support STEM education programmes

Currently, there is a shortfall of STEM skills in the workforce in Thailand at a time when the government is encouraging the younger generation to pursue STEM education as one of the measures towards Thailand 4.0 economy. More students in STEM education leads to a larger STEM workforce and a more productive economy. Astronomy can play a vital role in supporting STEM education programmes; Thailand is keen to work with the UK to share experiences and develop programmes that support STEM education that will benefit Thailand in the longer term.

• Project proforma and weblink to call will be circulated by email.
Thank you