THE DESIGN FOR A SPACE WEATHER BASED EARLY WARNING TOOL

Call for PhD Candidates

Project Background

The Science, Technology and Innovation Secretariat is pivotal in spearheading initiatives aimed at developing the country's space capabilities. The country's interest in space technology is driven by the need for improved communication, agriculture monitoring, disaster management, and environmental conservation. As part of the efforts to harness the application of space science and technology, government of Uganda, through the Aerospace Bureau awarded a grant to Busitema University to develop "A SPACE WEATHER BASED EARLY WARNING TOOL".

The long-term objective of the project is to contribute to reducing space weather related disasters in Uganda through developing a robust space based weather prediction system. The project aims at developing knowledge and expertise in space weather by following these three specific objectives:

1) Develop and test a space weather based early warning tool
2) Design and prototype ground weather instrumentation for data collection
3) Provide training in space science and technology

The achievement of these objectives is based on strengthening of key institutions in these domains with a strong link to citizen-based science. To achieve objective 3 of the project, part of the project funds have been allocated to train Ugandans who are passionate about space science and are willing to contribute to the overall goal of the project.

The PhD Topics

Through PhD training the project will enhance innovation and collaboration in space activities, across a number of institutions of higher learning. The Project therefore seeks to recruit six (6) PhD candidates in the following critical areas;

1. Data Science (Geospatial Analytics, Data Assimilation and Ingestion, Remote sensor data anaylsis, Space weather forcasting)
2. Disaster Risk Assessment and Management
3. Sensor design and Weather Instrumentation
4. Community Uptake of weather products and climatic service

What the Project offers

1) The full PhD funding is conditional to the successful defense of a PhD proposal.
2) The PhD will be carried out in 3 years while registered in a Ugandan university.
3) The scholarship covers project related travel and other expenses.
4) A modest monthly stipend will also be provided.

Applicant's profile

a) Must hold a Masters degree in Space Science, Physics, Computer Science, Artificial Intelligence/Machine Learning, Embedded Systems, Geographic Information Systems, Remote Sensing, Electronics Engineering, Telecommunications Engineering, Finance and Risk Assessment, Statistics, or any other related to the PhD topic.
b) Must have obtained at least upper second class Bachelor's degree.
c) Must develop a detailed concept note and demonstrate ability to produce a full research proposal and final thesis.
d) Must have applied for or secured a PhD vacancy from a Ugandan university.
e) The candidate will be subject to the regulations of the host university.
f) The PhD candidate shall devote his/her full-time to his/her studies.
g) The PhD candidate will join the project team (The ST&I-Aerospace Bureau and Busitema University) during its lifetime.

Application procedure

The application should include:

a) A mandatory concept note (maximum five pages). The concept note must include a title for the proposed study, brief background highlighting key literature, research problem, main research question, methods and list of key references.
b) Copies of academic documents.
c) A letter of recommendation from the current employer/immediate supervisor indicating their willingness to grant you time to undertake the PhD progamme.
d) Letter from an academic referee supporting your application.
e) A soft copy of your master thesis.
f) The applications should be addressed to the principal investigator, A SPACE WEATHER BASED EARLY WARNING TOOL, Busitema University, Box 236, Tororo and the applications should be send with updated CV as a single pdf file to swt@busitema.ac.ug and copied to doreen.agaba@sti.co.ug, geoffrey.andima@gmail.com, gibertocen@gmail.com not later **July 31st, 2024, 5:00 PM EAT**

The Selection Process

- Pre-selected candidates will be assessed based on how the documents submitted align with the needs of the project for the selected topic.
- The pre-selected candidates will then be contacted for an interview to assess their suitability.
- Applicants who would have not been contacted by the end of the pre-selection process should consider themselves unsuccessful.

Approved for Release

28/06/2024

Principal Investigator
SWT Project