

## **PhD scholarship related to Mars Science at NSSTC / UAE University**

The National Space Science and Technology Center (NSSTC) at UAE University (UAEU) in Al Ain invites applications from enthusiastic, ambitious, and hard-working Emirati nationals for a graduate scholarship leading to a PhD related to Mars Science, to start in Fall 2022 (exceptional candidates may be able to begin in Spring 2022). Supervision of the PhD thesis will be done jointly between NSSTC and a partnering University Department (Geography, Geology, Physics, etc.).

The PhD project is linked to the Emirates Mars Mission (EMM), which arrived at Mars on 9 February 2021. The area of study will be "Building and analysing comprehensive Mars dust storm databases from 1 Martian Year of EMM observations". This project would suit a person with pronounced interest and a study background in remote sensing (both satellite imagery and quantitative data) and atmospheric and planetary science. With the arrival of EMM at Mars, NSSTC is very keen to recruit Emirati nationals as PhD students in this area.

The task of this PhD project is to build a dust storm database spanning at least 1 Martian Year (1 Martian Year is ca. 1.9 Earth Years) based on EMM. The database construction will start with the beginning of the EMM Science phase, scheduled for mid 2021. The basis of this database will be images by the EMM instrument EXI (Emirates Exploration Imager). The combination with quantitative data on the dust optical depth, atmospheric temperature, etc. from the EMM instruments EXI and EMIRS (Emirates Mars Infrared Spectrometer) is possible. A particular challenge is the fact that EMM will map dust storms each few hours or, equivalently, several times per day. This implies that the database has to be updated on a sub-daily basis. Likewise, this makes the database unique from existing dust storm databases. An integral part will be the subsequent statistical/mathematical analysis of dust storm characteristics such as source region, storm track and size, timing and duration, etc. The student will join the EMM science team and work alongside Emirati and international scientists to achieve the project goals. Please see also <https://www.uaeu.ac.ae/en/cgs/phd-project-2pdf.pdf> for more information.

The accepted candidate for this NSSTC Scholarship will be supported by NSSTC for four years with a stipend of about 11,000 AED/month. For formal admission to UAEU's PhD program, the applicant will also need to apply through UAEU's College of Graduate Studies. We will discuss this with the candidate directly. Separate scholarships are also available to cover tuition fees - please see <https://www.uaeu.ac.ae/en/cgs/scholarship.shtml> for details.

For further information, please contact Dr. Claus Gebhardt at [claus.gebhardt@uaeu.ac.ae](mailto:claus.gebhardt@uaeu.ac.ae) or +971 3 713 4487. Applications for entry in Fall 2022 need to be received by the end of November 2021 to meet the University's deadline of 31 December 2021. Applications for entry in Spring 2022 need to be received as soon as possible (the University's deadline is likely to be sometime in October 2021).

**Minimum Requirements:** Emirati nationality. Bachelor's and Master's degree in a relevant subject: Remote Sensing, Geography, Geology, Physics, Mathematics, Astrophysics, Space Science, Computer Science, Data Science, Meteorology, Atmospheric Science, Planetary Science, or similar. Bachelor GPA 2.50, Master GPA 3.00 (or equivalent) or higher. IELTS Academic 6.5, assessed in the last two years (unless some exception applies). Full PhD admission requirements can be found at <https://www.uaeu.ac.ae/en/cgs/admission.shtml>.

**Rank/Experience/Skill Set:** A keen interest in space exploration and planetary science. A strong aptitude for computing work and programming. Strong mathematical ability. Excellent communication skills in English, both verbal and written. Ability to self-motivate and work independently. An ideal candidate will have taken courses both in Remote Sensing, Mathematical Data Analysis, and Atmospheric/Planetary Science.

**College/Department:** NSSTC and a partnering University Department (Geography, Geology, Physics, etc.).

**Instruction to Applicant:** Submit the following via Jobs@UAEU at <https://jobs.uaeu.ac.ae> (**please don't email**): Motivation letter (ca. 2 pages). CV (ca. 2 pages). Certified University diplomas and transcripts. IELTS exam certificate. Arrange for two letters of recommendation from professionals familiar with your academic work. Copy of Passport and Khulasat Al-Qaid.