

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations - IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (IP)

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INSPIRING GENERATIONS THROUGH EMIRATES MARS MISSION'S (EMM) SCIENCE
OUTREACH PROGRAMS

Abstract

The Emirates Mars Mission (EMM) is a space exploration mission to study the Martian atmosphere and aims to contribute to the development of United Arab Emirates' (UAE) science and technology sector, to develop UAE's scientific capabilities, and to increase UAE's contribution to the scientific community. The purpose of EMM's educational science outreach programs is to promote space science education and research in UAE schools and universities, to build capabilities in Science, Technology, Engineering and Mathematics (STEM) fields and to engage students, teachers, professors, researchers and the public in the mission.

In line with EMM's goals, several science outreach programs are established:

1) Research Experience for Undergraduates (REU) program: program for university students that was launched in 2015, to expose them to a career in scientific research. 2) EMM Research Grant program: program for encouraging professors and students in UAE to work on a Mars or space science research project. 3) EMM Science Workshop: an annual workshop that provides an informative presentations on EMM status, Mars as a planet, its history and the science behind it. A variety of topics are presented by national and international researchers and scientists in the field to highlight the prominence of Mars and to educate the science community on the recent Martian atmosphere research and engage them in the Emirates Mars Mission. 4) Webinars and workshops for a specified target audience or public.

Additionally, numerous educational programs were developed since the launch of the mission that targeted younger generations to motivate and inspire them to pursue STEM fields. Generation Hope initiative was designed to have intensive education and outreach activities during the six month journey of Hope probe to Mars. It provided the opportunity for teachers and students to know the mission in depth and to create a culture of scientific research and discovery within the same targeted group. This was achieved through series of webinars, workshops, virtual visits and email circulars and newsletters, accommodating the extenuating circumstance of COVID-19.

Throughout these programs, there was a significant increase in the base of UAE national students in science fields. The paper will highlight how EMM engages the whole community to be part of the mission, mainly focusing on exposing students to research opportunities utilizing an ongoing mission at the backbone of their research, hence providing them with a link to a potential career option.