

# INFORMAL PHYSICS WITH THE MIDDLE EASTERN AND NORTH AFRICAN REGION AND PUBLIC

Shams El-Adawy<sup>a</sup>, Maryam H. Esmat<sup>b</sup>, and George Iskander<sup>c</sup>

Presenting Author: George Iskander ([georgeiskander@uchicago.edu](mailto:georgeiskander@uchicago.edu))

<sup>a</sup>Department of Physics, Kansas State University, Manhattan, KS 66506, USA

<sup>b</sup>Physics and Astronomy Department, Johns Hopkins University, Baltimore, MD 21218, USA

<sup>c</sup>Department of Physics, University of Chicago, Chicago, IL 60637, USA

**KEYWORDS:** Middle East and North Africa, Informal Physics, Representation

Physics, as a human venture, seeks to engage people all across the world. Engagement encompasses a variety of activities through which to interact with the public, including students and early-career physicists. In the Middle Eastern and North African (MENA) region, the landscape of the type of activities is relatively under-explored, and the exploration of these activities vis-à-vis different groups remains an area of interest within the literature. The public engagement activities that we present in this talk cover the authors' experiences in three key activities: talks, mentorship, and social media engagement, all of which aim to address a MENA audience. The purpose of these activities is to spark interest in physics, gauge existing interest, engage in discussions about the impact of physics research locally and globally, and provide information about physics careers.

Engagement comes in various forms — for instance, talks at Egyptian universities consisted of informal teaching events which engaged diverse audiences, including early-career physicists and the general public. Our online engagement has centered around mentorship of physics students and early-career physicists. Through the informality of social media, we have been able to engage with MENA students, both within the MENA region and within the diaspora in the context of research and early-stage career advice. The increasing influence of social media over the past decade has given rise to this new modality for engagement, which includes two types: public mentorship by raising awareness about physics and its applications and professional mentorship to provide information to early career physicists.

In the context of the broader literature, informal physics programs play a critical role in recruitment of under-represented populations into physics and their sense of belonging to the physics community (Rethman et al., 2021). Our work highlights the impact of these engagement activities with a novel audience that has not been represented in the physics education literature. Understanding how different members of the public respond to public engagement will be important for developing future strategies and programs dedicated to improving STEM engagement efforts in the MENA region. Our goal is to advocate for public engagement in the MENA world and to encourage more research in informal physics in the Arab region. We plan to present examples and discuss our experiences in talks, mentorship, and social media engagement with a MENA audience.

## REFERENCE

Rethman, C., Perry, J., Donaldson, J. P., Choi, D., & Erukhimova, T. (2021). Impact of informal physics programs on university student development: Creating a physicist. *Physical Review Physics Education Research*, 17(2), 020110.

Proceedings of the IUPAP International Conference on Physics Education, ICPE 2022 5-9 December 2022, page 80, ISBN: 978-1-74210-532-1.