

Mohamed Hassan Mohamed Helmy

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EDUCATION

BSc A second-semester fourth-year student at the Faculty of Navigation Science and Space Technology, Space Navigation, Beni-Suef University, Egypt

CGPA of 3.75

[21/09/2019 – 1/07/2024]

EXPERIENCE

Research

- Trainee for 4 months at the 9th Lab of Scientific Research Basics from EgyptScholars-16th Jun to 12th Jan 2021, 2022

have learned research and research methods, research ethics; scientific publishing and journals; paper structure and types; scientific, writing basics, essential tools for research; types of papers and journals; and how to find journals for publishing. Also, the training involved practicing each mentioned topic and having exercises and exams about them. We finally worked in teams on an article and, made a presentation discussing it.

SKILLS

Language skill

Arabic [native], English [very good], Japanese [Basics]

Programming skills

Python [intermediate]AND SunPy . MATLAB [Basics]

Computer skills

Microsoft Tools, Mendeley

SCIENTIFIC ACTIVITIES

Conferences

- 33rd IUPAP Conference on Computational Physics -The University of Texas at Austin | Oden Institute- 1st Aug to 4th Aug2022
- ISM 2021 Structure, characteristic scales, and star formation | Beirut (virtual), 11-14 May 2021

Schools &Training

- 8th Plasma School 2023- EgyPlasma - 04 - 07 March 2023
- SSI 2022- 50th SLAC summer Institute - August 8-19, 2022
- 8th Summer school in plasma physics and fusion energy- Princeton Plasma Physics Lab- 13rd Jun to 24th Jun 2022
- The 9th lab of scientific Research Basics - Egypt Scholars- 16th Jun to 12th Jan 2021, 2022

- Introduction to Rocket and Satellite Engineering | April- 12-17 – 2020
- International Summer School on the Interstellar Medium of Galaxies, from the Epoch of Reionization to the Milky Way 12-23 July-2021
- The 5th Azarquel School of Astronomy 5-19 November 2021
- Alexandria Quantum Computing Winter School, 1-5 February 2021

SELF-LEARNING

Online courses

Mastering Python - El zero Web School, 2021 SMA interferometry school- Harvard, Introduction to plasma physics by J D Callen- WisconsinMadison university, STELLAR Space Weather Workshop 2021 -Dublin Institute, Machine learning Regression-by Hesham Asem.

MIT 8.04 Quantum Physics I, Spring 2013, MIT 8.04 Quantum Physics I, Spring 2013

[MIT OCW]

- Ordinary Differential Equations, Special Theory Of Relativity, Analytical Mechanics, Quantum Mechanics1 Electrodynamics1, Mathematical Physics 1, cosmology.

[ZC OCW]

RESEARCH INTERESTS

Solar flares. CME, ICME

Quantum Plasma solar atmosphere, quantum plasma stellar structure, star formation.

Early universe galactic evaluation, compact stellar object approaching dark matter and quantum gravity, Space Environut impact on satellite in orbit. Nano particles dynamics properties.

PROJECTS

- Solar flares prediction
- Space environment effects on perovskite solar cell performance

PUBLICATION

- Abdelrazik, A. S., et al. "Potential of Molecular Dynamics in the simulation of nanofluids properties and stability." *Journal of Molecular Liquids* (2023): 121757.
- A guide of how six categories of metal-, metal-oxide-, and carbon-based nanofluids are prepared and the implications on their stability [accepted]

MEMBERSHIPS

American Physical Society

A member from 2/21/2023 to 1/31/2024

REFERENCES

Prof. Osama M. Shalabiea

- Professor pf astrophysics & Space Science Dean of faculty of Navigation Science and Space Technology , BSU

- Shalabiea@sci.cu.edu.eg

Dr. HAITHAM ELSHIMY

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Dr. Ahmed Abdelrazik

- Postdoctoral Fellow interdisciplinary Research Center for Renewable Energy and Power Systems, KFUPM
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