Mahmoud A. E. Ibrahim

PERSONAL AND CONTACT INFORMATION

- **Birthdate**:*09/09/1997*
- Google scholar - Home page
- **Email**: *mahmoud_Ibrahim@science.aun.edu.eg* - *mamr40089@gmail.com*
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- **Address:** Assiut university staff members compound-Assiut-Asyut-Egypt -**Postal code**: *71526*

EDUCATION

- **BSc Physics** – *Faculty of Science- Assiut University* *(2015—2019)*
  - **CGPA:** 3.71/4 *(Excellent with honors)* **Rank:** First. **Thesis:** [1]

Online Courses

- Capstone: Retrieving, Processing, and Visualizing Data with Python – Coursera – **University of Michigan.**
- Group Theory Methods in Physics - NPTEL - **IIT Bombay.**
- Quantum mechanics I - NPTEL - **IIT Bombay.**
- Classical mechanics - NTNU lectures - **Norwegian University of Science and Technology.**
- Probability and statistics - **khan academy**
- Data scientist career path - **Dataquest**
- Data specialization - **Egypt Fwd free scholarship**

WORK EXPERIENCE

- **Teaching Assistant-** *Faculty of Science- Assiut University* *(22/07/2020—Present)*

- **Research Assistant to Prof. Khaled S. M. Essa** *(2019—2020)*
  - Developed analytical atmospheric dispersion models by solving the advection-diffusion equation.
  - Publications:

    1. Essa, K., Shalaby, A., **Ibrahim, M**., & Mosallem, A. (2020). Analytical Solutions of the Advection–Diffusion Equation with Variable Vertical Eddy Diffusivity and Wind Speed Using Hankel Transform. ***Pure And Applied Geophysics***, 2020 Springer Nature Switzerland AG, 177. doi: https://doi.org/10.1007/s00024-020-02496-y

CERTIFICATES

- **TOEFL iBT**: Overall Score: 106, Reading: 30, Listening: 30, Speaking: 22, Writing: 24 *(07/2020)*
- **ACADEMIC IELTS**: Overall Score: 7, Reading: 8, Listening: 8, Speaking: 6, Writing: 6 *(02/2018)*

AWARDS

- **ASSIUT UNIVERSITY AWARD FOR SCIENTIFIC PUBLISHING**: for publishing a scientific paper [1] in a Q2 journal *(20/09/2020)*

SHORT SCHOOLS AND SUMMER INTERNSHIPS

- **Utrecht University summer school of theoretical physics**-*The Netherlands* *(08/2019)*

  - Topics included quantum gravity & string theory, cosmology, and quantum & soft condensed matter.

- **4th Spring Plasma School in Port said**-Egypt *(03/2019)*

  - Intro to plasma physic in Nuclear Fusion, and astrophysics.-Intro to Python and Latex.

- **7th High Energy Physics School at Ain-Shams University**- *Egypt* (*01/2019—02/2019)*

  - Listed in **the most active students list** selected to attend **the Egyptian Network of High Energy Physics** monthly meetings and other events.

- **Nuclear Research Center-Egyptian Atomic Energy Authority**-*Inshas-Egypt (08/2018—09/2018)*

  - Worked on a research project in atmospheric pollution dispersion modeling at the *Department Of Mathematics and Theoretical Physics -the Nuclear Research Center.*

- **Queen Mary University of London Summer School -Introduction to Particle Physics** -*UK -Undergraduate Associate* *(06/2018—07/2108)*
  - **Academic credit**: 15, **Grade:** A
  - Prepared and presented a report titled **Standard Model**, **Solar neutrino problem and neutrino oscillations.**

VOLUNTEERING / EXTRACURRICULAR ACTIVITIES

- **Volunteer English Translator** (*09/2015—06/2019)*

  - Translated scientific documents from English to Arabic and vice versa to help fellow students.

  - Translated the entire Statistical Mechanics course, Quantum mechanics (II) course, most of the numerical analysis course.

- **Volunteer Physics Tutor** (*09/2015—06/2019)*

  - Tutored students in physics and mathematics courses.

  - Created a YouTube channel to upload videos when face-to-face communication was not possible.

- **Communication Committee Member-Faculty of Science Batch 59 Graduation Ceremony** *(08/2018—07/2019)*
  - Contacted decision makers at Assiut University and fundraised for the ceremony and other activities.

- **Participant in the teaser video of the 4th Spring Plasma School in Port said-Egypt** *(03/2019)*

- **A presenter in the video article (THE TICKET) by Mahmoud Abo Shnief** (02/*2017)*

SKILLS

- ***Programing****:* FORTRAN (Numerical analysis) - C++ - Python (Data analysis) - Matlab.
- ***Software****:* Latex – *SQL* - Microsoft Office.

INTERESTS

- Theoretical physics-General relativity-Quantum foundations-Field theories-Radiation physics.
- Atmospheric dispersion modeling.
- Data science-sports Analytics
- Molecular Biology- System biology.