

Faisal Sayed

MASTER STUDENT

24 Port Said Street, Musha, Asyut, Egypt

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Education

Assiut University

MASTER OF SCIENCE, PHYSICS

Asyut, Egypt

Expected Mar. 2021

- **Area of Specialization:** Space Plasma Physics
- **Thesis:** Electrostatic ion acoustic waves at plasma environment of lower ionosphere of Venus
- **Supervisor:** Prof. Waleed Moslem

Assiut University

BACHELOR OF SCIENCE, PHYSICS

Asyut, Egypt

Sept. 2012 – June. 2016

- **Honors thesis:** Invariance of Maxwell's Equations under Lorentz transformations
- **Academic supervisor:** Dr. Sherif Rashad
- **Cumulative GPA:** 3.60/4.00

Teaching Experience

Department of Physics, Faculty of Science, Assiut University

TEACHING ASSISTANT

Asyut, Egypt

Jun. 2017 – Present

- **Teaching undergraduate student labs such as:**

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|-----------------------------------|----------------------------|
| - Mechanics Lab | - Light and Optics Lab |
| - Thermodynamics Lab | - Modern Physics Lab |
| - Electricity and Magnetism Lab | - Physical Electronics Lab |
| - Nuclear & radiation Physics lab | |

This work included grading student reports and devising exams. These tasks were performed for a range of class levels, from introductory to advanced upper level

- **Tutoring topics in physics for science and engineering undergraduates, including:**

- | | |
|------------------|-----------------------------|
| - Mechanics | - Electricity and Magnetism |
| - Thermodynamics | - Light and Optics |

at the level of Serway and Jewett's textbook Physics for Scientists and Engineers with Modern Physics

Research Experience

Joint Institute for Nuclear Research

THE FOURTH STAGE OF THE INTERNATIONAL STUDENT PRACTICE INTERN

Dubna, Moscow

8 – 28 Dec. 2019

- I attended a short course on modern cosmology and solved some problems on the evolution of the Universe given by Friedmann model filled with radiation and dark energy. I also numerically compared the theoretical models with observational data

Assiut University

GRADUATE RESEARCH

Asyut, Egypt

Sept. 2019 – Present

- I am enrolled in the plasma physics master program since September 2019. My research interests are located in the fields of theoretical space plasma physics and involve theoretical modelling of the propagation of different waves and their instabilities in the planetary ionospheres and magnetospheres of the solar system

Assiut University

UNDERGRADUATE RESEARCH

Asyut, Egypt

Sept. 2015 – Jun. 2016

- My graduation research project article titled “**Invariance of Maxwell's Equations under Lorentz Transformations**” was in the field of relativistic electrodynamics and discusses all the details that appear to require Maxwell's equations to be invariant under the Lorentz transformations can be derived from postulates different from what Einstein used. We start with Maxwell's equations and apply the relativity principle to them. With this approach, Special theory of relativity is reformulated in a mere form that has its dynamical applications without using the Lorentz transformations and its kinematical contradictions

Publications

PUBLISHED

F S H Sayed, W M Moslem, R E Tolba, A A Turkey, R A Koramy. Three-dimensional propagation of ion-acoustic waves in the plasma environment of the Venusian ionosphere. *Physica Scripta*, 95, 115603, 2020

F.S.H. Sayed, A.A. Turkey, R.A. Koramy, W.M. Moslem. Nonlinear ion-acoustic waves at Venus ionosphere. *Advances in Space Research* 66, 1276, 2020

IN PREP

F.S.H. Sayed, W.M. Moslem. Linear characteristics of ion-acoustic waves in the ionosphere of Venus. It is prepared to be submitted to *Journal of Geophysical Research: Space physics*

Conference presentations

Mar. 2019, **Nonlinear analysis of ion acoustic waves at Venus ionospheres**. 2nd One day conference (Downstream Research in Plasma Physics), held on the last day of the 5th Spring Plasma School which was held under the auspices of the British University in Egypt in Port Said, Egypt.

Oct. 2016, **Invariance of Maxwell's equations under Lorentz transformations**. The Fifth International Conference for Young Scientists in Basic and Applied Sciences held at Faculty of Science, Assiut University, Egypt

Schools, Workshops, & Conferences

- May 2020 – Present, **6th Biennial African School of Fundamental Physics and Applications** Marrakesh, Morocco
- 1 – 5 Mar. 2020, **5th Spring Plasma School (5th SPSP)** Port Said, Egypt
- 29 Aug. 2019, **Advanced Summer Workshop of Physic** Zewail City, Egypt
- 10 – 14 Mar. 2019, **4th Spring Plasma School (4th SPSP)** Port Said, Egypt
- 28 Aug – 8 Sept. 2016, **3rd Summer School on Basic Physics** Zewail City, Egypt
- 6 – 7 Nov. 2015, **SCITA Astrofans Conference** Cairo, Egypt
- 10 May. 2015, **Relativity Day conference** Zewail City, Egypt

Awards, & Grants

Nov. 2020 **Assiut University award for scientific publishing**, Assiut University

Jul. 2020 **Assiut University award for scientific publishing**, Assiut University

Jan. 2020 **Academic Scientific Research and Technology (ASRT) Award**, National Network of Nuclear Science (NNS)

Oct. 2016 **The best graduate student oral presentation**, The Fifth International Conference for Young Scientists in Basic and Applied Science

Skills

A) Computer skills

- **Numerical computation:** Matlab – Mathematica – Maple
- **Word/text processing software:** LaTeX – Scientific work place – Microsoft Office
- **Programming:** Python

B) Languages

- **English** (proficient)
- **Arabic** (native)

References

1) Prof. Waleed Moslem

- Physics Department, Faculty of Science, Port Said University
- ✉ wmmoslem@sci.psu.edu.eg & ☎ [W. M. Moslem](#)

2) Prof. Bijan Saha

- Laboratory of Information Technologies, Joint Institute for Nuclear Research, Dubna, Moscow reg. Russia
- ✉ bijan64@mail.ru & ☎ [Bijan Saha](#)

3) Dr. Sherif Rashad

- Physics Department, Faculty of Science, Assiut University
- ✉ srmokhtar@aun.edu.eg & ☎ [Sherif Rashad MOKHTAR](#)