europass

Amira Hassanein Abdallah

Date of birth: 10/08/2000 | **Nationality:** Egyptian | **Gender:** Female |

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EDUCATION AND TRAINING

01/08/2020 – 01/07/2022 Al Minufiyah, Egypt

BS IN SCIENCE AND EDUCATION (PHYSICS)[GPA3,7/4] University of Sadat City

Website http://usc.edu.eg/en

WORK EXPERIENCE

05/02/2021 – 07/09/2022 cairo, Egypt

INTERNEE AT ATOMIC AND NUCLEAR AUTHORITY MY PREVIOUS PROFESSOR

Main Activities and Responsibilities

- Led a team of researchers in advancing Time-Resolved Imaging Microscopy (TRIM) and Scanning Ion Microscopy (SIM) for sub-nanometer resolution studies in material science.
- Analyzed numerous samples created through engineering methods at the college using cutting-edge technology at the Atomic and Energy Organization.
- Conducted a detailed comparison of TRIM and SIM microscopes, exploring their capabilities and applications in material science.
- Initiated and conducted supplementary physics and English language classes, demonstrating dedication to education and mentorship.
- Taught physics at Elshaheed Esmail Wahba Gaafer High School, imparting knowledge and fostering a love for the subject among students.
- Actively engaged in teaching English language skills to individuals from diverse backgrounds online.

Skills and Experience

- Experimental physics methodologies and data analysis
- Computational physics and numerical methods
- Programming languages such as Python and MATLAB for physics simulations and data analysis
- Teaching physics and English language skills

Experimental Physics Experiences

- SIM
- TRIM
- SRIM software for ion matter interaction
- Ion beam analysis
- X-ray fluorescence (XRF)
- Atomic force microscopy (AFM)
- X-ray diffraction (XRD)
- Scanning electron microscopy (SEM)
- X-ray photoluminescence spectroscopy (XPS)
- Corrosion testing

DIGITAL SKILLS

Microsoft Excel | Microsoft Word | Outlook | Skype | Social Media | Microsoft Powerpoint | Good listener and communicator | Facebook | Zoom

LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
FRENCH	B1	B1	A2	A2	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

ADDITIONAL INFORMATION

CONFERENCES AND SEMINARS

07/03/2023 – 11/03/2023

NUPPAC Conference

- Attendet the 14th International Conference on Nuclear and Particle Physics (NUPPAC)
- This conference was held in Cairo from March 7 to 11, 2023 to discuss the latest advances in nuclear and particle physics.
- This conference provided a platform to discuss and delve into the latest advancements in nuclear and particle physics, broadening my horizons and enhancing my understanding of this dynamic field.

29/09/2023 – 30/09/2023

PHOEBE conference

- Attended the 8th International Conference on Photonics, Optics, and Lasers (PHOEBE 2023) in Luxor, Egypt
- This conference has covered a wide range of topics related to photonics, optics, and lasers, including photonic devices and systems, optical imaging communication, laser physics ,also interested in the talks on quantum optics, as I am currently working on a research project in this area. I am also looking forward to meeting other researchers in the field of photonics, optics, and lasers matter interaction

PROJECTS

14/01/2022 – 10/04/2022

Linear optical characteristics as well as gamma-ray shielding capabilities of quaternary lithium-zinc borate glasses with Y3+ ions

- During my graduation project we aimed to investigate the linear optical properties of transparent quaternary lithium-zinc borate glasses with Y3+ ions ,and we examine the gamma-ray attenuation capabilities of the prepared glasses.
- Through collaborative efforts and guidance from our esteemed professors, we achieved an impressive score of 98%. This success was made possible by the exceptional resources and laboratories at our disposal. Our primary focus during the project was a detailed comparison of Tim and Sim microscopes, exploring their capabilities and applications in material science.

HONOURS AND AWARDS

Additional Certification

- Microsoft Certified: ICDL (Word, Excel, PowerPoint, Access, IT)
- TOFFL Certificate (Teaching English)
- Microsoft Office Specialist: Excel Associate
- TESDA Certificate: Supervising Work Basics
- Commonwealth of Learning Certificate in Digital Education
- World Health Organization Certificate in HHFA Data Analysis Platform

- ADBI Institute Certificate in Circular Economy
- Open learn university certificate in shines begining
- Appsevents Certificate: Google Drive Intro
- UNECE Certificate in "How to Report Emissions Under the Convention on Long-Range Transboundary Air Pollution"
- British Council and Microsoft Course Completion Certificate: "Getting Started"
- Reuters Certificate: Introduction to Digital Journalism
- NFHS learning centre certificate in How to be leader
- US Department of State and US Government Certificate , MOOC 2023
- Western Certificate: The Founder's Journey in Entrepreneurial Process
- Forage Certificate in Data Visualization and visual experience
- United States Institute of Peace Certificate in French
- Six Sigma White Belt Certificate
- IACET Care Courses Certificate
- Forage Certificate in In-Premise Sales Virtual Experience Program
- Linux Foundation certificate of Sybersecurity essential.

PHYSICS EXPERIENCE

Courses and Certificates

Advanced Physics Courses

- Particle Physics and High-Energy Physics
- Solid State Physics and Condensed Matter Physics
- Material Characterization tenchniques
- Quantum Mechanics and Quantum Physics
- Astrophysics: Stars and Galaxies

Mathematical Physics Course

- Mathematical Methods In Physics
- Advanced Calculus and Differential Equations in Physics

Laboratory Techniques in Experimental Physics

- Research Assistant at the Atomic and Nuclear Authority (2022),
- I gained expertise in experimental physics methodologies and data analysis

Computational Physics and Numerical Methods

- Proficient in programming languages
- Python and MATLAB for physics simulations and data analysis

Online Physics Courses

- Coursera: "Introduction to Modern Physics"
- Coursera: "Introduction to Material Science"
- Coursera: "Introduction to Nuclear Materials"
- Coursera: "Introduction to Ion Matter Interaction"
- Coursera: "Introduction to Material Characterization"
- Open Learn University Certificate In "Science and Nuclear Energy
- Open Learn University Certificate In Energy Resources: Solar Energy
- Vishvan College of Physics Certificates of Participation
- Coursera "understanding Einstein "the special theory of relativity "
- Coursera "introduction to Mechanics specialization"
- Coursera"physics 101 Force and Kinematics "
- Open Learn Certificate In Physics: "What Are Waves?
- Open Learn University Certificate In Physics: "Astudio'r Gwyddorau Naturiol yn Ddwiyieithog"

HOBBIES AND INTERESTS

Hobbies

- Learning languages
- Learning different cultures (Chinese)
- Playing chess

Interest

- Nuclear Materials design and development (Zr alloys, Ni alloys, High entropy alloys
- Material Characterization (XRD, SEM, Nano-indentation, SIM, TRIM)t
- Quantum Chromodynamics (QCD)
- Quantum Field Theory (QFT) and S-Matrix Quantum Gravity .
- Collider Physics and Beyond Standard Model (BSM) Physics.

VOLUNTEERING

01/12/2022 – 01/12/2023

Teaching physics

- Ministry of Education Certificate of volunteering physics teaching at Elshaheed Esmail Wahba Gaafer High School for one year

08/06/2021 – 11/02/2022 Egypt

Society services

- Ministry Education Certificate of Volunteering in opening class to teach illiterate people "How to Reed and write "

PUPLICATION

Submited to Nuclear journal

Effect of plasma irradiation on the microstructure and properties of stainless steel•

Aims

•Improving the surface properties
Such as hardness and wear resistance.
• Characterizing the compound coatings,
including aluminum nitride (AlN) and iron nitride (FeXN)
• Exploring the feasibility of using ASPN as a technique to enhance the performance of non-ferrous metals like aluminum in various industrial applications.
•Usining spasific Suitable material and steps

RECOMMENDATIONS

Professor Dr, Mohamed Shams Physics and Mathematical Engineering Department, Faculty of Electronic Engineering, Sadatcity

- I have known Dr. Mohamed Shams for 4 years, as his student. His publications was rewarded in peer-reviewed journals. I have learned a great deal from him about physics, mathematical engineering, and research methodology.

Email mshamsmohamed2008@gmail.com

Professor Dr Mervat Ibrahim National Research in Radiation and Technology, Atomic and Nuclear Energy Sadatcity university

- I have known Dr Mervat Mohamed for four years. Sheis currently working on a research project to develop new methods for the safe and effi cient disposal of nuclear waste.
- She has also published numerous papers in peer-reviewed journals on topics such as radiation shielding design and the development of new nuclear materials.I was her research assistant and happy that she is my supervisor

Email merveribrahim@gmail.com