



Curriculum Vitae

PERSONAL DETAILS:

- Name: Mohammed Hassen Eid Abu-Sei'leek, Ph.D.
- Date and Place of Birth: September 1st 1972, Zarqa- Jordan.
- Nationality: Jordanian.
- Marital Status: Married.
- Corresponding Address:
Zarqa-Jordan.
Mobile: +962-788958112
- E-mail: moh2hassen@yahoo.com

Current Academic Rank and Job: Associate Professor of *Nuclear Physics*

Date of Promotion to or Appointment in Current Academic Rank: 6/10/2016.

ACADEMIC QUALIFICATION:

- Ph.D degree in *Nuclear Physics* from the University of Jordan, Amman, Jordan, 2007. "Very Good"
Ph.D Dissertation titled:
" *Excitation of the Delta-Resonance in Compressed and Cold Finite Nuclei*".
Supervisor: Professor Mahmoud Mar'i Hasan
Committee Members:
Prof. Dia-Eddin Arafah, Member
Prof. Jamil Khalifeh, Member
Prof. Nabil Ayoub, Member
- Master degree in *Nuclear Physics* from the University of Jordan, Amman, Jordan, 1999. "Very Good"
Master degree thesis titled:
" *Coherent Photon Scattering Technique for Bone Mineral Densitometry* ".
- Bachelor of Science degree in physics from Yarmouk University, Irbid, Jordan, 1995. "Very Good"

ACADEMIC EMPLOYMENT and EXPERIENCE:

20/09/2020-now

- “Associate Professor “ at Zarqa university, Zarqa, Jordan.
22/10/2019-5/2/2020 "First Semester"
- "Part-time lecturer Associate Professor of Physics" at Isra University, Amman, Jordan.
09/06/2019-01/08/2019 "Summer Semester"
- "Part-time lecturer Associate Professor of Physics" at The Hashemite University, Zarqa, Jordan
6/10/2016– 31/8/2019
- “Associate Professor “ at Zarqa university, Zarqa, Jordan.
20/10/2015- 13/09/2017
- “Head of Physics Department" at Zarqa University, Zarqa, Jordan.
21/09/2014– 5/10/2016
- “Assistant Professor" at Zarqa University, Zarqa, Jordan.
09/09/2011– 16/08/2014
- "Assistant Professor" at Majmaah university, Al-Zulfi, Kingdom of Saudi Arabia
14/10/2008– 05/09/2011
- "Assistant Professor" at Al-Jouf university, Al-Jouf, Skaka, Kingdom of Saudi Arabia
13/2/2000 – 14/10/2008
- " Instructor" at Hashemite university, Zarqa , Jordan.
First semester 96/97 - Second semester 98/99
- " Teaching Assistant " at University of Jordan, supervising Freshman Lab., radiation and medical Lab.
24/9/1996-13/2/2000
- " Physics teacher" at public school in Zarqa, Jordan.
16/9/ 1995 - 24/9/1996
- "Technician of physics Lab. " at Al-Isra University, Amman, Jordan .

TRAINING COURSES & SEMINARS:

Capable to do the most famous software programs dealing with PC's in the following Software.

- ICDL (International Computer Driving License) Certificated.
- Microsoft Teams.
- Microsoft Zoom.
- E-Learning (Moodle)
- The Desire2Learn Community (E-LEARNING)
- A COURSE IN THE INTEGRATION OF TECHNOLOGY IN UNIVERSITY TEACHING
- E-LEARNING CULTURE
- PROFESSIONAL PARTICIPATION OF FILES AND REMOTE PROJECTS
- SKILLS OF E-LEARNING SYSTEMS
- Latex Writing
- ActivInspire, Smartboard, Teamboard and KALboard.
- Workshop on Academic Accreditation in accordance with the requirements of the standards body for adoption of the German Academic (ASSIN).
- Attended the scientific activities of the forum for academic guidance.
- Member of the Board of Accreditation and Quality Assurance at Zarqa University.
- Building outputs of university education and tools to measure.
- Programmatic accreditation requirements.
- Electronic platforms PKLNS.
- BASIC
- PASCAL
- FORTRAN
- MATHEMATICA
- MATHLAB
- UNIVERSITY EDUCATIONAL TOOLS TECHNOLOGY
- MOODLE (E-LEARNING)
- LECTORA (E-LEARNING)
- TEGRITY
- ELLUMINATE
- BLACKBOARD
- E-LEARNING AND THE DESIGN OF ELECTRONIC COURSE ACROSS THE WEB
- E-EDUCATION SYSTEM AND BRIDGES

RESEARCH INTERESTS:

- Theoretical Nuclear Structure Computations.
- Compressed Finite Nuclei.
- Heated Finite Nuclei.
- Heavy Ion Collisions.
- Astrophysics.
- Radiation Physics.
- Exchange Meson Theory.
- Intermediate Energy Physics.
- Thermal Properties of Finite Nuclei.
- Medical Physics.

TEACHING INTERESTS:

- E-learning Courses.
- Medical Physics.
- Modern Physics.
- Introductory Physics.
- General Physics (I).
- General Physics (II).
- General physics for medical students.
- Scientific Culture.
- Astronomy
- Modern Physics.
- Mathematical physics (I).
- Mathematical physics (II).
- Nuclear Physics (I).
- Nuclear Physics (II).
- Optics.
- Optics Lab.
- Neutron Physics.
- Radiation Physics.
- Electromagnetism (I).
- Electromagnetism (II).

- Thermodynamics.
- Classical Mechanics (I)
- Classical Mechanics (II).
- Quantum Mechanics (I).
- Quantum Mechanics (II).
- Statistical Physics.
- Freshman Laboratories.
- Radiation and Medical Laboratory.
- Advance Laboratories.
- General Physics Courses for Medical, Science, and Engineering Students I & II.
- Computational Physics.
- The Physics of Vibrations and Waves.
- Nuclear Physics Laboratories.
- Seminars (Graduate Projects).

PUBLICATIONS:

https://scholar.google.com/citations?view_op=list_works&hl=ar&user=Qs7TvsMAAAAJ

- Abu-Sei'leek, 2024," *Thermal properties of the spherical ^{40}Ca nucleus*", Eur. Phys. J. Plus (2024) 139,588.
<https://doi.org/10.1140/epjp/s13360-024-05399-2>
- Mohammed Shqair, Iqbal M. Batiha, **Mohammed H. E. Abu-Sei'leek**, Shameseddin Alshorm, Amira Abdelnebi, Iqbal H. Jebril, S. A. Abd El-Azeem,2024, "**Numerical Solutions for Fractional Multi-Group Neutron Diffusion System of Equations**" International Journal of Neutrosophic Science (IJNS) 24,08-38.
<https://doi.org/10.54216/IJNS.240401>
- Shafer Momani, Mohammed Shqair, Iqbal M. Batiha, **Mohammed H.E. Abu-Sei'leek**, Shameseddin Alshorm, S.A. Abd El-Azeem, 2024," *Two–energy group neutron diffusion model in spherical reactors*", **Results in Nonlinear Analysis 7 (2024) No. 13, 160–173.**
<https://doi.org/10.31838/rna/2024.07.02.013>
- Abu-Sei'leek, 2024," *Mean Field Calculations of Compressed Neutron-Rich ^{48}Ca Nucleus with Δ Resonances*", Indian Journal of Physics, 98,
<https://link.springer.com/article/10.1007/s12648-024-03102-w>

- GHARIB M. GHARIB, MAHA S. ALSAUODI, MOHAMAD ABU-SEILEEK, 2024," **Conformable Triple Sumudu Transform with Applications**", WSEAS TRANSACTIONS on MATHEMATICS, 23.42. DOI: [10.37394/23206.2024.23.5](https://doi.org/10.37394/23206.2024.23.5).
- Abu-Sei'leek, 2023," *Delta Excitation in the Double Magic Nucleus ^{56}Ni* ", **Pramana- J. Phys.** **97**, 56.
<https://link.springer.com/article/10.1007/s12043-023-02532-1>
- Abu-Sei'leek, 2023," *Self-Consistent Single-Particle Spectra with Delta Excitation*" The 7th International Arab Conference on Mathematics and Computations.
https://link.springer.com/chapter/10.1007/978-981-99-0447-1_19
- Abu-Sei'leek, 2022," *Excitation of the Delta-Resonance in Compressed Super Heavy Neutron-Rich Doubly Magic $^{310}_{126}\text{Ubh}_{184}$ Nucleus*", **Nuclear Phys. A.** **1027**, 122522.
<https://doi.org/10.1016/j.nuclphysa.2022.122522>
- Abu-Sei'leek, 2019," *Properties of ^4He Nucleus in the Mean Field Approximation with Compression*", **Journal of Science and Technology, Transactions A: Science.** Springer International Publishing , Springer International Publishing
<https://doi.org/10.1007/s40995-018-0654-1>
- Abu-Sei'leek, 2018," *Ground State Properties of Closed Shell ^4He Nucleus under Compression*", **Journal of Applied Mathematics and Physics**, **6**, 458.
- Abu-Sei'leek, 2016,"*Delta Excitation in the Compressed Finite Nucleus ^{90}Zr* ", **Journal of Applied Mathematics and Physics**, **4**, 586.
- Abu-Sei'leek, M. Farrag, E., and Masharfe, R., 2016,"*Temperature Dependent Thermal Properties of ^{40}Ca Nucleus*", **International J. of Innovation in Science and Mathematics**,**4** (1),37.
- Farrag, E., Abu-Sei'leek, M. and Abu Al-Sayyed, M., 2015,"*Study of heavy metals concentration in cosmetics purchased from Jordan markets by ICP-MS and ICP-OES*", **AES Bioflux**,**7** (3),383.
- Abu-Sei'leek, M., 2014, "*Neutron-Rich ^{208}Pb Nucleus with Delta Excitation under Compression*" **Turk. J. Phys.****38** ,253.
- Abu-Sei'leek, M., 2011, "*Delta Excitation Calculation Studies in Compressed Finite Spherical Nucleus ^{40}Ca* " , **Nucl. Phys. Rev.** **28** (4),416.

- Abu-Sei'leek, M., 2011, "***Doubly-Magic ^{100}Sn Nucleus with Delta Excitation under Compression***" J. Phys. Soc. Jpn. **80** (10) 104201.
- Abu-Sei'leek, M., 2011, "***Delta Excitation Calculation Studies in the Ground State of the compressed Finite Heavies Doubly-Magic ^{100}Sn Nucleus***" Turk. J. Phys. **35** , 273.
- Abu-Sei'leek, M., 2011, "***Resonances-Excitation Studies Investigation of $\Delta(3,3)$ in Ground State of ^{90}Zr Cold Finite Heavy Nuclei at Equilibrium and Under Compression*** ", Commun. Theor. Phys. **55**(01),115.
- Abu-Sei'leek, M., 2011, "***Hartree-Fock Calculation Studies Investigation of $\Delta(3,3)$ Resonances in the Ground State of Compressed Heavy Spherical Finite Nucleus ^{132}Sn*** ", International J. of Pure and Applied Phys., **7**(1),73.
- Abu-Sei'leek, M., 2011, "***Investigation of $\Delta(3,3)$ Resonances Effects on the Properties of Neutron-Rich Double Magic Spherical Finite Nucleus, ^{132}Sn , in the Ground State and Under Compression***", Pramana- J. Phys. **76** (4),573.
- Abu-Sei'leek, M. and Hasan M., 2010, " ***Δ -Resonances in Ground State Properties of $^{40}_{20}\text{Ca}$ Spherical Cold Finite Nucleus at Equilibrium and Under Compression***", Commun. Theor. Phys. **54** (2),339.
- Abu-Sei'leek, M., 2010, "***Delta Excitation in Compressed Neutron-Rich Double Magic Spherical Finite Nucleus ^{132}Sn*** ", Nucl. Phys. Rev. **27**(4),399.
- Abu-Sei'leek, M., Ph.D Dissertation titled: "***Excitation of the Delta-Resonance in Compressed and cold Finite Nuclei***" at the University of Jordan Library,2007.
- Abu-Sei'leek, M., Master thesis titled: "***Coherent Photon Scattering Technique for Bone Mineral Densitometry*** ", at the University of Jordan Library,1999.

INTERNATIONAL CONFERENCES:

- 20-22 June 2012_The Energy & Materials Research Conference, Zurbarán, Badajoz, Spain. Abu-Sei'leek, M., "***Neutron-Rich ^{208}Pb Nucleus with Delta Excitation under Compression***" (Poster)
- 16-18/4/2012 Fifth Saudi Science Conference, Makkah, Saudi Arabia. Abu-Sei'leek, M., "***Doubly-Magic ^{100}Sn Nucleus with Delta Excitation under Compression***" (Oral).
- 19-22/4/2012 Third International Conference for Higher Education, Riyadh, Saudi Arabia.

RESEARCH PROJECTS:

- "***Excitation of the Delta-Resonance in Compressed Super Heavy Neutron-Rich Doubly Magic $^{310}_{126}\text{Ubh}_{184}$ Nucleus***" I acknowledge support for this work from the Scientific Research Deanship, Zarqa University under Award No. 10-2018.

- **“Properties of ^4He Nucleus in the Mean Field Approximation with Compression ”** I acknowledge support for this work from the Scientific Research Deanship, Zarqa University under Award No. 10-2016.
- **“Delta Excitation in the Compressed Finite Nucleus ^{90}Zr ”** I acknowledge support for this work from the Scientific Research Deanship, Zarqa University under Award No. 2-2016.
- **“Neutron-Rich ^{208}Pb Nucleus with Delta Excitation under Compression”**
I acknowledge support for this work from the Engineering and Applied Sciences, Research Center, Scientific Research Deanship, Majmaah University under Award No. 10-2012.
Date: 3/4/ 2012 – 2/4/2013.
- **“Temperature Dependent Thermal Properties of ^{40}Ca Nucleus”**
I acknowledge support for this work from the Scientific Research Deanship, Zarqa University under Award No. 10-2015. Date: 1/10/ 2014 – 1/4/2015.
- **“Delta Excitation in the Compressed Finite Nucleus ^{90}Zr ”**
I acknowledge support for this work from the Scientific Research Deanship, Zarqa University under Award No. 80-2015. Date: 1/8/ 2015 – 1/2/2016.

PROFESSIONAL SERVICES

Refereed for:

- World Journal of Engineering and Physical Sciences.
- Nuclear Physics Review.
- The Journal of the Physical Society of Japan.
- International Journal of Scientific Research in Knowledge.

Awards:

- The Excellence of the Applied Research Award from Scientific Research Deanship, Majmaah University during Academic year 2011/2012 for **“Doubly-Magic ^{100}Sn Nucleus with Delta Excitation under Compression”** J. Phys. Soc. Jpn. **80** (10) 104201.

MEMBERSHIP IN ACADEMIC ASSOCIATIONS

- **Member of the Board of Accreditation and Quality Assurance at Zarqa University**
- **The Chairman of the Board of Accreditation and Quality Assurance at Faculty of Science.**
- Jordanian Physical Society.
- Jordan Society for Scientific Research, Entrepreneurship, and Creativity.
- Saudi Physical Society.

MEMBERSHIP IN COMMITTEES

- Committee for Assistants and Scholarships.
- The Graduate Affairs Committee.
- The E-learning Committee.
- Community Service Committee.
- Supreme Committee Supervising for the Department.
- Committee of the Study Plans.
- Committee of the laboratories.
- The Committee of Graduate Studies.
- Committee of the TAs and Talented.
- Scientific Research Committee at the Faculty.
- Scientific Research Committee at the Department.
- Committee for Creativity and Community Service at the Faculty.
- Study Plans Committee.

RELATED SKILLS:

- Strong organization and detail oriented skills.
- Well regard for Interpersonal, Written and verbal Communication.
- Demonstrated ability to acquire and apply knowledge rapidly.
- Fluent in English and mother tongue of Arabic.
- Electronic (online) Learning (The Desire2Learn Community, Lectora, Tegrity, Elluminate, Blackbord, Moodle).

REFERENCES: Available upon request.