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Mohammad F. Alshudifat

Assistant Professor in Physics

Personal information

Marital Status:

Married

Year of Birth:

1 976.

Education

PhD degree in Nuclear and high Energy physics.

University of Tennessee-Knoxville, United states. (2010-2015)

M.Sc. degree in physics.

Yarmouk University, Jordan. (2000-2003)

B.Sc. degree in physics.

Al al-Bayt University, Jordan. (1995-1999)

Experience

2020-present, Assistant Dean for Computing Affairs

Deanship of Graduate Studies, Al al-Bayt University

2015-present, Assistant Professor.

Department of Physics, Al al-Bayt University

2016/2017 academic year, Department Head.

Department of Physics, Al al-Bayt University

2011-2015, Member of experimental group

Oak Ridge National Laboratory (ORNL), Oak Ridge, TN, USA.

1999-2009, High school teacher

Ministry of Education, Jordan

Communication Skills

2016, Meeting, Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) user meeting

Discussed different experimental opportunities that can be done in SESAME.

2011-2015, Nuclear decay Experiments, ORNL, TN, USA

Participated in several nuclear decay experiments in Holifield Radioactive Ion Beam Facility (HRIBF), ORNL TN, USA

2015, Nuclear decay Experiment, Argonne National Laboratory, Lemont, IL, USA

Participated in building and analyze a nuclear decay experiment

2014, Conference on Application of Accelerators in Research and Industry (CAARI), San Antonio, Texas, USA

Presented research from my PhD search

2012, Fifth International Conference on Fission and Properties of Neutron-Rich Nuclei, Sanibel Island, Florida, USA

Presented research from my PhD search



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Software Development Skills

2011. *2011 Fall Meeting of the APS Division of Nuclear Physics, East Lansing, Michigan, USA*

2011, *Tenth Exotic Beam Summer School - EBSS2011, Michigan state university*

Attended theoretical and experimental training about nuclear reactions and decays with practical application inside the National Superconducting Cyclotron Laboratory (NSCL)

Programming

- C++
- Shell
- Python

Computer Software

- Linux
- iOS

LANGUAGES

- Arabic
- English

References

- Alshudifat, M., Grzywacz, R., Madurga, M., Gross, C., Rykaczewski, K., Batchelder, J., ... others (2016). Reexamining gamow-teller decays near ni 78. *Physical Review C*, 93(4), 044325.
- Alshudifat, M., Grzywacz, R., & Paulauskas, S. (2015). Development of a segmented scintillator for decay studies. *Physics Procedia*, 66, 445–450.
- Alshudifat, M. F. (2019). The extent of acceptance of the non-separable solution in cylindrical coordinates through the hydrogen atom. *Advanced Studies in Theoretical Physics*, 13(8), 433–437. doi: <https://doi.org/10.12988/astp.2019.91246>
- Alshudifat, M. F. (2021). *1h, 2h, and 3h nuclear magnetic dipole moment effect on the electron energy states*. Pramana - Journal of Physics.
- Alshudifat, M. F., Serhan, M., & Abusini, M. (2020). Elastic scattering of nucleon by the lightest mirror nuclei 3h and 3he using the optical model potential. *International Journal of Modern Physics E*, 29(09), 2050078. doi: <https://doi.org/10.1142/S0218301320500780>
- Crider, B., Prokop, C., Liddick, S., Al-Shudifat, M., Ayangeakaa, A., Carpenter, M., ... others (2016). Shape coexistence from lifetime and branching-ratio measurements in 68, 70ni. *Physics Letters B*, 763, 108–113.
- Go, S., Grzywacz, R., Mazzocchi, C., Liddick, S., Alshudifat, M., Batchelder, J., ... others (2020). Mapping of fragmented $\nu f 5/2 \rightarrow \pi f 7/2$ transitions in the co 73 \rightarrow ni 73 decay. *Physical Review C*, 102(4), 044331. doi: <https://doi.org/10.1103/PhysRevC.102.044331>
- Kolos, K., Miller, D., Grzywacz, R., Iwasaki, H., Al-Shudifat, M., Bazin, D., ... others (2016). Direct lifetime measurements of the excited states in ni 72. *Physical review letters*, 116(12), 122502.
- Ramayya, A. F., Karny, M., Rykaczewski, K., Wolińska-Cichocka, M., Grzywacz, R., Gross, C., ... A.V. (2014). First results from the modular total absorption spectrometer at the hribf. *Nuclear Data Sheets*, 120, 26–29. doi: <https://doi.org/10.1016/j.nds.2014.06.132>