

## Curriculum Vitae

**N. Al-Dahan**

**Name:** Nawras Mohammed Shaheed Al-Dahan

**Date of Birth:** 01/01/1978

**Place of Birth:** Kerbala

**Nationality:** Iraqi **Material**

**Status:** Married

**Language:** Arabic and English

**Passport No.:** A7806288 **Academic**

**Rank:**

- a- Assistant Lecturer, 16/08/2003.
- b- Lecturer, 16/05/2006.
- c- Assistant Professor, 09/07/2012.
- d- Professor, 09/07/2017.

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**Place of Work:**

Presidency University- University of Alkafeel (2018- till now).

**Qualification:**

- 1- B.Sc. (Physics), University of Babylon 1999, Iraq.
- 2- M.Sc. (Nuclear Physics), University of Babylon 2002, Iraq.
- 3- Ph.D. (Nuclear Physics), University of Surrey 2010, UK.

**Positions Held:**

- 1- Assistant of Physics Department Head, College of Science, University of Kerbala (2003-2007).
- 2- Science College Council secretariat, University of Kerbala (2003-2007).
- 3- Head of Physics Department, College of Science, University of Kerbala (15/1/2011 - 21/9/2014).
- 4- Director of Scholarship and Cultural Relations Department, University of Kerbala (01/09/2014-11/01/2016).
- 5- Vice President for Scientific Affairs, University of Kerbala, (20/9/2015 – 24/9/2015) Also from (17/5/2016 – 31/5/2016).
- 5- Dean of Science College, University of Kerbala, (19/11/2015 – 30/10/2017).
- 6- Dean of Alkafeel University College, (31/10/2017 – 26/8/2018).
- 7- Rector of Alkafeel University (27/8/2018 – Till now)

## Courses Taught

- Undergraduate Courses:
  1. Atomic Physics, University of Kerbala, Iraq
  2. Classical Mechanics, University of Kerbala, Iraq
  3. Nuclear Spectroscopy, University of Kerbala, Iraq
  4. Quantum Mechanics, University of Kerbala, Iraq
  5. Nuclear Physics, University of Surrey, UK
  6. Principle of Physics, University of Surrey, UK
  7. Atomic Molecular Quantum Physics, University of Surrey, UK
- Postgraduate Courses (M.Sc.):
  1. Radiation and Environmental Protection Laboratory, University of Surrey, UK
  2. Radiation Detection and Instrumentation Laboratory, University of Surrey, UK
  3. Research Procedure Course, University of Kerbala, Iraq

## Theses Supervision

- M.Sc. Thesis Titles:
  1. "The effect of the scattered photons from the surrounding on the energy spectrum of the scintillation detector NaI(Tl)", University of Babylon, 2002, Iraq.
  2. "Isomer and  $\beta$ -delayed gamma-ray spectroscopy for structure studies of heavy, neutron-rich nuclei", University of Surrey, 2010, UK.
- Supervised M.Sc. Students:
  1. Khalid G. Mutashar, "Study of nuclear structure of 202-204Pt isotopes by shell model application using OXBASH program", Department of Physics, College of Science, University of Babylon, 2011.
  2. Yousra Abd Al-Hassan Kadhim, "Nuclear Structure Study of Even-Even 184-194Os Isotopes Using IBM-1", Department of Physics, College of Science, University of Kerbala, 2015.

## Research Metrics

H-Index	16
Scopus	<a href="https://www.scopus.com/authid/detail.uri?authorId=57203176996">https://www.scopus.com/authid/detail.uri?authorId=57203176996</a>
Google Scholer	<a href="https://scholar.google.com/citations?user=IOZotNMAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=IOZotNMAAAAJ&amp;hl=en</a>
ORCID	<a href="https://orcid.org/0000-0003-4892-271X">https://orcid.org/0000-0003-4892-271X</a>
ResearchGate	<a href="https://www.researchgate.net/profile/N-Al-Dahan">https://www.researchgate.net/profile/N-Al-Dahan</a>
LinkedIn	<a href="https://iq.linkedin.com/in/nawras-al-dahan-813382ab">https://iq.linkedin.com/in/nawras-al-dahan-813382ab</a>

## Publications:

1. Kuchta M., Kuchtová D., Bodnárová A., al Dahan N., "Comparison of questionnaires and biochemical markers in the assessment of passive smoking," 1990.
2. Kuchta M., Kuchtova D., Sevcovova N., Spisak B., Al-Dahan N., "Effect of passive smoking on pulmonary function and cardiovascular system," 1992.
3. Regan P.H., Alkhomashi N., Al-Dahan N., Podolyák Z., et al., "First results with the rising active stopper," *Physics Letters B*, 2008
4. Al-Dahan N., Podolyák Z., Regan P.H., Górska M., et al., "Nuclear structure 'southeast' of 208Pb: Isomer spectroscopy of 208Hg, 209Tl, and 210Tl," *Nuclear Physics A*, 2009
5. Al-Dahan N., Podolyák Z., Regan P.H., Steer S., et al., "Structure of  $n \geq 126$  nuclei produced in fragmentation reactions," *Physical Review C*, 2009
6. Al-Dahan N., Podolyák Z., Regan P.H., Steer S., et al., "Isomeric states in 208Hg and 209Tl populated in fragmentation reactions," *Physical Review Letters*, 2009,
7. Regan P.H., Alkhomashi N., Al-Dahan N., Podolyák Z., et al., "New insights into the structure of exotic nuclei using RISING at GSI," *Physical Review C*, 2009, DOI:
8. Bacelar A.M.D., Bruce A.M., Podolyák Z., Lalkovski S., Al-Dahan N., et al., "Angular momentum population in fragmentation reactions," *Journal of Physics G: Nuclear and Particle Physics*, 2009
9. Deo A.Y., Podolyák Zs., Walker P.M., Algora A., Al-Dahan N., et al., "Structures of Po201 and Rn205 from EC/ $\beta^+$ -decay studies," *Physical Review C*, 2010,
10. Al-Sulaiti H., Alkhomashi N., Al-Dahan N., Al-Dosari M., et al., "Determination of the natural radioactivity in local and imported polished granite used in Iraq," *Journal of Environmental Radioactivity*, 2011,
11. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "Isomers in neutron-rich lead isotopes populated via the fragmentation of 238U," *Physical Review C*, Vol. 85, No. 4, pp. 067306, 2011, DOI: 10.1103/PhysRevC.85.067306.
12. Kempley R.S., Podolyák Z., Bazzacco D., Gadea A., Al-Dahan N., et al., "Cross-coincidences in the 136Xe+208Pb deep-inelastic reaction," *Physical Review C*, Vol. 84, No. 4, 2011, DOI: 10.1103/PhysRevC.84.044321.
13. Benzoni G., Morales A.I., Valiente-Dobón J.J., Al-Dahan N., et al., "First measurement of beta decay half-lives in neutron-rich Tl and Bi isotopes," *Physical Review Letters*, Vol. 109, No. 16, 2012, DOI: 10.1103/PhysRevLett.109.162502.

14. Bowry M., Podolyák Zs., Kurcewicz J., Pietri S., Al-Dahan N., et al., "Half-life measurements of isomeric states populated in projectile fragmentation," *Journal of Physics: Conference Series*, Vol. 381, 2012, DOI: 10.1088/1742-6596/381/1/012053.
15. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "New isomers in the full seniority scheme of neutron-rich lead isotopes: The role of effective three-body forces," *Physical Review Letters*, Vol. 109, No. 16, 2012, DOI: 10.1103/PhysRevLett.109.162502.
16. Al-Dahan N., Regan P.H., Podolyák Z., Walker P.M., et al., "Multiple  $\beta$ -Decaying states in  $^{194}\text{Re}$ : Shape evolution in neutron-rich osmium isotopes," *Physical Review C*, Vol. 85, No. 3, 2012, DOI: 10.1103/PhysRevC.85.034301.
17. Al-Sulaiti H., Nasir T., Al Mugren K.S., Alkhomashi N., Al-Dahan N., et al., "Determination of the natural radioactivity levels and hazards of soil samples in Karbala," *Applied Radiation and Isotopes*, Vol. 70, No. 7, pp. 1344-1350, 2012, DOI: 10.1016/j.apradiso.2011.11.015.
18. Sharrad F.I., Abdullah H.Y., Al-Dahan N., Mohammed-Aziz H., et al., "Shape transition and collective excitations in neutron-rich  $^{144,146,148}\text{Ba}$ ," *Physical Review C*, Vol. 86, No. 4, pp. 044327, 2012,
19. Bruce A.M., Bacelar A.M.D., Benzoni G., Gadea A., Al-Dahan N., et al., " $\beta$  decay of  $^{102}\text{Y}$  produced in projectile fission of  $^{238}\text{U}$ ," *Journal of Physics: Conference Series*, Vol. 381, 2012, DOI: 10.1088/1742-6596/381/1/012053.
20. Al-Dahan N., Regan P.H., Podolyák Zs., Walker P.M., et al., "Publisher's Note: Multiple  $\beta$ -Decaying states in  $^{194}\text{Re}$ ," *Physical Review C*, Vol. 85, No. 3, 2012, DOI: 10.1103/PhysRevC.85.039904.
21. Hinke C.B., Böhmer M., Boutachkov P., Faestermann T., Al-Dahan N., et al., "Superallowed Gamow-Teller decay of the doubly magic nucleus  $^{100}\text{Sn}$ ," *Nature*, Vol. 486, pp. 341-345, 2012, DOI: 10.1038/nature11116.
22. Sharrad F.I., Abdullah H.Y., Al-Dahan N., Umar A.S., et al., "Low-lying states of  $^{184}\text{W}$  and  $^{184}\text{Os}$  nuclei," *Chinese Physics C*, Vol. 37, No. 3, 2013, 10.1088/1674-1137/37/3/034101.
23. Bowry M., Podolyák Zs., Pietri S., Kurcewicz J., Al-Dahan N., et al., "Population of high-spin isomeric states following fragmentation of  $^{238}\text{U}$ ," *Physical Review C*, Vol. 88, No. 2, 2013, DOI: 10.1103/PhysRevC.88.024611.
24. Denis Bacelar A.M., Bruce A.M., Podolyák Z., Alkhomashi N., Al-Dahan N., et al., "The population of metastable states as a probe of relativistic-energy fragmentation reactions," *Physics Letters B*, Vol. 723, No. 4-5, pp. 302-306, 2013, DOI: 10.1016/j.physletb.2013.05.033.

25. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "New  $\mu$ s isomers in the neutron-rich  $^{210}\text{Hg}$  nucleus," *Physics Letters B*, Vol. 725, No. 4-5, pp. 292-296, 2013, DOI: 10.1016/j.physletb.2013.07.053.
26. Morales A.I., Benzoni G., Gottardo A., Valiente-Dobón J.J., et al., " $\beta$  -decay studies of neutron-rich Tl, Pb, and Bi isotopes," *Physical Review C - Nuclear Physics*, Vol. 89, No. 1, 2014, DOI: 10.1103/PhysRevC.89.014324.
27. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "Isomeric decay spectroscopy of the Bi 217 isotope," *Physical Review C*, Vol. 90, No. 3, 2014, DOI: 10.1103/PhysRevC.90.034317.
28. Al-Sulaiti H., Nasir T., Regan P.H., Bradley D.A., Al-Dahan N., et al., "Effect of the grain size of the soil on the measurement of radon exhalation rate using CR-39 detectors," *Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences*, Vol. 57, No. 3, pp. 129-138, 2014.
29. Salman A.D., Al-Dahan N., Sharrad F.I., Hossain I., et al., "Calculation of inelastic electron-nucleus scattering to discrete states including contributions from meson-exchange currents," *International Journal of Modern Physics E*, Vol. 23, No. 4, 2014, DOI: 10.1142/S0218301314500463.
30. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "New isomers in the neutron-rich region beyond  $^{132}\text{Sn}$ ," *EPJ Web of Conferences*, Vol. 66, 2014, DOI: 10.1051/epjconf/20146602043.
31. Morales A.I., Benlliure J., Kurtukián-Nieto T., Schmidt K.-H., Verma S., Regan P.H., Podolyák Z., Górska M., Al-Dahan N., et al., "Half-life systematics across the  $N=126$  shell closure: Role of first-forbidden transitions in the  $\beta$  decay of heavy neutron-rich nuclei," *Physical Review Letters*, Vol. 113, No. 2, 2014, DOI: 10.1103/PhysRevLett.113.022702.
32. Morales A.I., Benzoni G., Al-Dahan N., Vergani S., et al., "First measurement of the charge radius of  $^{70}\text{Ni}$  and its implications for the rp and vp processes," *EPL (Europhysics Letters)*, Vol. 111, No. 5, 2015, DOI: 10.1209/0295-5075/111/52001.
33. Hossain I., Ahmed I.M., Sharrad F.I., Abdullah H.Y., Al-Dahan N., et al., "Yrast states and  $B(E2)$  values of even  $^{100-102}\text{Ru}$  isotopes," *Chiang Mai Journal of Science*, Vol. 42, No. 4, pp. 996-1004, 2015.
34. Al-Sulaiti H., Nasir T., Al Mugren K.S., Alkhomashi N., Al-Dahan N., et al., "Measurement of natural radioactivity and radon exhalation rate in building materials used in the state of Kuwait," *Radiation Physics and Chemistry*, Vol. 127, pp. 222-235, 2016, DOI: 10.1016/j.radphyschem.2016.07.003.
35. Pragati, Deo A.Y., Podolyák Z., Walker P.M., Al-Dahan N., et al., " $\beta$  decay of

- 128,130Cd isotopes and excited states in 128,130In," *Physical Review C*, Vol. 94, No. 6, 2016, DOI: 10.1103/PhysRevC.94.064316.
36. Bowry M., Podolyák Zs., Pietri S., Regan P.H., Al-Dahan N., et al., "Half-life and spin of  $^{60}\text{Mn}$ ," *Chinese Physics C*, Vol. 41, No. 6, 2017, DOI: 10.1088/1674-1137/41/6/064105.
37. Al-Sulaiti H., Nasir T., Regan P.H., Bradley D.A., Al-Dahan N., et al., "Half-life measurements in Dy-164 to Dy-154 using  $\gamma$ - $\gamma$  coincidences," *Radiation Physics and Chemistry*, Vol. 140, pp. 132-136, 2017, DOI: 10.1016/j.radphyschem.2017.05.001.
38. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "New spectroscopic information on Tl 211,213: A changing structure beyond the N=126 shell closure," *Physical Review C*, Vol. 99, No. 5, 2019, DOI: 10.1103/PhysRevC.99.054326.
39. Ahmed I.M., Hossain I., Sharrad F.I., Abdullah H.Y., Al-Dahan N., et al., "Electronic structure and luminescence properties of Ba<sub>2</sub>YNbO<sub>6</sub>:Eu<sup>3+</sup> red phosphor for solid-state lighting," *Journal of Materials Science: Materials in Electronics*, Vol. 31, pp. 9835-9845, 2020, DOI: 10.1007/s10854-020-03528-y.
40. Hossain I., Ahmed I.M., Sharrad F.I., Abdullah H.Y., Al-Dahan N., et al., "Investigation of the electronic, magnetic, and optical properties of Fe-doped SnS<sub>2</sub> monolayers: A first-principles study," *AIP Advances*, Vol. 10, No. 10, 2020, DOI: 10.1063/5.0027446.
41. Al-Dahan N., Regan P.H., Podolyák Zs., Walker P.M., et al., "Structural, electronic, and magnetic properties of Co-doped MoS<sub>2</sub> monolayers," *Materials Science Forum*, Vol. 1039, pp. 237-244, 2021, DOI: 10.4028/www.scientific.net/MSF.1039.237.
42. Gottardo A., Valiente-Dobón J.J., Benzoni G., Al-Dahan N., et al., "Detailed spectroscopy of doubly magic Sn<sup>132</sup>," *Physics Letters B*, 2021, DOI: 10.1016/j.physletb.2021.136591.

## Conferences:

1- *The 3<sup>rd</sup> Scientific Symposium on Environmental Pollution in Babylon City*, College of Science, University of Babylon, 23<sup>th</sup> -25<sup>th</sup> July 2002, Iraq.

2- *The First Scientific Symposium for postgraduates studies in Physics Department, University of Babylon, February 2003, Iraq.*

3- *The Second National Typical Conference in Physics, University of Mousel, 24<sup>th</sup> -25<sup>th</sup> November 2002, Iraq.*

4- *The 4<sup>th</sup> International Symposium on use of nuclear techniques in environmental studies, University of Yarmouk, 13<sup>th</sup> -15<sup>th</sup> September (2004), Irbid, Jordan.*

5- *IoP Nuclear Physics Conference at Liverpool University, 1<sup>st</sup> -3<sup>th</sup> April 2008, Liverpool, UK.*

6- *XIII. International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS), 25<sup>th</sup> - 29<sup>th</sup> August 2008, Cologne, Germany.*

7- *Zakopane Conference on Nuclear Physics, 1<sup>st</sup> – 7<sup>th</sup> September 2008, Poland.*

8- *IoP Nuclear Physics Conference at Birmingham University, 6<sup>th</sup> - 8<sup>th</sup> April 2009, Birmingham, UK.*

9- *IoP Nuclear Physics Conference at Edinburgh University, 19<sup>th</sup> - 21<sup>th</sup> April 2010, Edinburgh, UK.*

10 - *The First scientific Conference of the College of Science at Kerbala University, 13-14 March 2013, Kerbala, Iraq.*

11- *The First Scientific Conference of Undergraduate Students of the College of Science*

at *Kerbala University*, 10 April 2013, Kerbala, Iraq.

11- *The Second Scientific Conference of the College of Science at Kerbala University*, 26-27 February 2014, Kerbala, Iraq.

13- *The Second Scientific Conference of Undergraduate Students of the College of Science at Kerbala University*, 8 April 2013, Kerbala, Iraq.

14- *Al-Ameed Second Global Academic Conference at Alabbas Holy Shrine*, 9-11 October 2014, Kerbala, Iraq.

15- *The Third Scientific Conference of the College of Science at Kerbala University*, 26-27 February 2015, Kerbala, Iraq.

16- *The first environmental conference of civil society organizations*, Organization of development Iraqi environmental, 23 April 2016, Kerbala, Iraq.

17- *International Conference on Medical Education of the College of Medicine at University of Kerbala*, 25-26 September 2016, Kerbala, Iraq.

18- *Second International Scientific Conference of Alkafeel University*, 24/2/2018

19- *Third International Scientific Conference of Alkafeel University*, 20/12/2021

20- *Fourth International Scientific Conference of Alkafeel University*, 20/12/2022

### **Postgraduate Training Schools Attended:**

1- *Introduction course to LD equipment at the LD didactic training center*, 20<sup>th</sup> – 23<sup>rd</sup> February 2006, HÜRTH, Germany.

2- *Radiation Protection Induction Course*, 2<sup>th</sup> November 2007, University of Surrey, Guildford, UK.

3- *Mini School on the Physics of NUSTAR at the University of Surrey*, 8<sup>th</sup> - 11<sup>th</sup> of June 2009, Guildford, UK.

4- *UK STFC Nuclear Physics Summer School, University of Leicester*, 12<sup>th</sup> - 23<sup>th</sup> of September 2009, Leicester, UK.

5- *Nuclear Shell Model and Interactions Course*, 1<sup>st</sup> - 3<sup>th</sup> of March 2010, CERN, Switzerland.



### **Other International Nuclear Physics Meetings Attended:**

- 1- *Annual NuSTAR Meeting at GSI, 23<sup>rd</sup> -27<sup>th</sup> of March 2009, GSI, Germany.*
- 2- *Workshop on Nuclear Isomers: Structure and Applications, 19th – 21th of May 2009, University of Surrey, UK.*

### **Experimental Fieldwork in Nuclear Physics:**

- 1- *<sup>100</sup>Sn: Isomer and Beta Decay Studies Around N=Z=50 GSI, Germany, February 2008.*
- 2- *Isomer studies of N=128 Isotones GSI, Germany, April-May 2008*
- 3- *<sup>205</sup>Au, Long Lived isomeric decays in N=126 nuclei CERN, Switzerland, July 2008*
- 4- *Search for New Seniority Isomer Decays in Neutron Rich Lead Nuclei with N>128 GSI, Germany, September 2009.*
- 5- *<sup>208</sup>Tl Studied using Deep Inelastic Reactions with a Xe Beam INFN Legnaro, Italy, May 2010.*