C.V. : Ahmed A. Selman
Updated 9th Nov.2021

Name	**Ahmed Abdul-Razzaq Selman Abdul-Hussein Al-Mahdawi**
Date of Birth	**24th January 1974**
Marital Status	**Married**
Children	**Two**
Specialty	**Ph.D. in Nuclear Physics**
Position	**Assistant professor (since September 2014)**
Work Address	**Department of Astronomy and Space, College of Science, University of Baghdad**
Phone No.	**07702533558**
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Academic Qualifications

Degree	Field	College	University	Year
Ph.D.	Physics-Nuclear Physics	Science	Baghdad	**2009**
M.Sc.	Physics-Nuclear Physics	Science	Baghdad	**2000**
1997	Physics-General Physics	Science	Baghdad	**1997**

Career

Position	Institute	Period
Chairman	Department of Astronomy and Space, College of Science, University of Baghdad	Since May 2020 till now
Faculty Member	Department of Astronomy and Space, College of Science, University of Baghdad	Since November 2013 till now
Executive Manager	Information Technology Unit, College of Science, University of Baghdad	March 2011 – November 2013
Faculty Member	Department of Astronomy and Space, College of Science, University of Baghdad	September 2011 to March 2012
Executive Manager	Information Technology Unit, College of Science, University of Baghdad	December 2010 to September 2011
Faculty Member	Department of Astronomy and Space, College of Science, University of Baghdad	2008 till now

Teaching Positions

Period	Institute
– 2010 2012	Department of Physics, College of Science, University of Baghdad
– 2011 Now	Department of Astronomy and Space, College of Science, University of Baghdad
– 2012 2013	Department of Financial Auditing, Institute for Higher Financial Studies, University of Baghdad
– 2012 2013	Department of Legal Auditing, Institute for Higher Financial Studies, University of Baghdad
– 2011 2012	Department of Computer Science, College of Science, University of Baghdad

Courses Taught

1- Academic Courses No.: 64 courses

2- Supervision of Graduation Projects for B.Sc. Students: 13 projects.

3- Supervision of Master Students: 7 projects.

4- Supervision of Ph.D. Students: 4 projects.

Theses and dissertations under my supervision

Year	Department	Stage	Title	Student name
-2012 2014	Astronomy and Space	M.Sc.	Study of Solar Magnetic Field Generation using the Dynamo Model	Samar A. Thabit
-2012 2014	Physics	M.Sc.	Study of Morphometric Properties of Bulkana East of Iraq using Digital Image and DGPS	Ammar A. Ghani
-2013 2015	Astronomy and Space	M.Sc.	Study and Analysis of Solar Coronal Mass Ejections (CME) from SOHO/LASCO Coronagraph Data	Zeineb F. Hussein
-2014 2016	Astronomy and Space	M.Sc.	Calculation of Transition Rates for the PE Nuclear Model	Hamsa S. Ahmed
-2016 2017	Astronomy and Space	M.Sc.	Determination of CME Mass Using Matlab	Mays A. Mejwil
– 2016 2017	Astronomy and Space	M.Sc.	Calculation of Sate Density of Stellar Reaction using PE Nuclear Model	Abdullah A. Kareem
-2017 2019	Astronomy and Space	M.Sc.	Automatic Detection of Sunspot Size and Activity using Matlab	Noor Al-Huda K. Hussein
-2016 2019	Astronomy and Space	**Ph.D.**	Study of Comet Nucleus Composition using Euler Method	Kladid Jaber
-2018 2021	Astronomy and Space	**Ph.D.**	Nuclear Reaction Rates Calculations for Stellar Reactions	Lana T. Ali

-2019 now	Astronomy and Space	**Ph.D.**	Cross Section for Some Stellar Reactions using non-ESM Model	Hanan M. Saleh
-2020 now	Astronomy and Space	**Ph.D.**	Neutron-Induced Reaction Rates in Intermediate and Massive Stars	Noor Al-Huda K. Hussein

Published Papers

#	Title	Publication Info	Authors
1.	Study of beta-Irradiation Effects On Polymethylmetha-crylate (PMMA) Using (PALT).	Proceedings of the 3rd Conference on Nuclear and Particle Physics 20-24th October **2001**, Cairo, Egypt.	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
2.	Study of beta – irradiation effects on Polymethylmetha-crylate (PMMA) using (PALT), low doses.	Indian Journal of Physics, (India), Vol. 76A (5) **2002**, pp.457.	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
3.	Study of gamma-Irradiation Effects on the Polymethylmethacrylate (PMMA) Using PAL Method.	Iraqi Journal of Physics, Volume 1, No.1, **2002**, pp.1.	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
4.	Study of gamma-Irradiation Effects on The Microstructure of High Density Polyethylene (HDPE) Using PALS	Iraqi Journal of Science Volume 43C, No.2, **2002**, pp.39.	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
5.	The Effects of beta-Irradiation on The Microstructure of LDPE Using PALS.	J. Solid State Phys., (Germany), V. 95,(12), **2002.**	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
6.	Study of gamma-Irradiation Effects on the Microstructure of Low Density Polyethylene (LDPE) Using PALS.	Iraqi Journal of Physics, Volume 2, No.1, **2003**, pp.1.	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
7.	Distribution of Positron Annihilation Lifetime Components.	Um-Salama Science Journal Vol.5, No.2, pp.265-270 , (**2008**)	**Ahmed Abdul-Razzaq Selman** and Muna Ahmed Saeed
8.	Study of Comets Composition and Structure.	Journal of Al-Nahrain University, Vol.11, No.3, pp.80 (**2008)**	Salman Z. Khalaf **Ahmed A. Selman** and Huda S. Ali.
9.	Three Dimensional MHD Simulation of Comet Hale-Bopp Tail	Um Salama Journal of Science, Vol.5, No.4, pp.581. **(2008**)	Salman Zaidan Khalaf and **Ahmed Abdul-Razzaq Selman**
10.	Three – Dimensional Explicit Model For Cometary Tail Ions Interactions With Solar Wind	Journal of Al-Nahrain UniversityVol.12, No.2, pp.182. (**2009)**	M.J.Albermani, S. A. Alhamad, S.Z.Khalaf, and **Ahmed A. Selman**
11.	A Suggested Numerical Solution for the Master Equation of Nuclear Reaction	Journal of Kerbala University,Vol.7, No.1, Scientific, pp.271. **(2009)**	Mahdi H. Jasim, Shafik Sh. Shafik, and **Ahmed Abdul-Razzaq Selman**
12.	Preequilibrium Emission Spectra Calculations of	Proceedings of The 3rd Conference of Science College,	Mahdi H. Jasim, Shafik Sh. Shafik, and **Ahmed**

	Proton-Neutron Reactions with $^{54,56}Fe$ and ^{103}Rh Nuclei.	University of Baghdad, pp.2295-2305. **(March 2009)**	**Abdul-Razzaq Selman**
13.	Study of Comet Interaction with Solar Wind using Two-dimensional Implicit Method.	Proceedings of The 3rd Conference of Science College, University of Baghdad, pp.695-706. **(March 2009)**	Salman Zaidan Khalaf and **Ahmed Abdul-Razzaq Selman**
14.	Determination of Free Radicals Concentration of g-Irradiated PMMA using PALS.	Iraqi Journal of Science, Vol. 51, No.1, PP. 98-106, **(2010)**	**Ahmed Abdul-Razzaq Selman**
15.	Systematic Treatment of (gamma-N) Reaction with Li, Be, B and C Isotopes.	Iraqi Journal of Physics, Vol. 9, No.14, PP. 107-114, **(2011)**	**Ahmed Abdul-Razzaq Selman**
16.	Investigation of Beta - irradiation effects on the microstructure of Low Density Polyethylene (LDPE) using (PALT)	Iraqi Journal of Physics, Vol. 7, No.9, PP. 27-36 **(2009)**	Ali A. Abdulla, Abdul-Hussein A. Al-Bayati and **Ahmed A. Selman**
17.	Computation of Two-Component Transition Rates of Pre-equilibrium States.	Iraqi Journal of Science, Vol. 52, No.2, PP. 186-198, **(2011)**	**A. A. Selman,** M. H. Jasim and S. S. Almola
18.	Measurements of Background Radioactivity in Baghdad's Main Water Supply Stations: Sediment Samples.	Iraqi Journal of Physics, Vol. 9, No.14, PP. 57-69, **(2011)**	S. S. Almola**, A. A. Selman,** and M. J. Shamar
19.	Particle-Hole State Density Calculations with Non-Equidistant Spacing Model: I. Basic Formulation	Iraqi Journal of Physics, Vol. 8, No.11, PP. 53-64, (Iraqi Conference of Physics) **(2010)**	**A. A. Selman,** M. H. Jasim and S. S. Almola
20.	Particle-Hole State Density Calculations with Non-Equidistant Spacing Model: II. Pairing and Exact Treatment.	Iraqi Journal of Physics, Vol. 9, No.16, PP. 6-12 (Iraqi Conference of Physics) **(2011)**	**A. A. Selman,** M. H. Jasim and S. S. Almola
21.	Calculation of Particle Emission Rates for Nucleon-Induced Reactions with non-Equidistance Spacing Model Dependence	Iraqi Journal of Physics, Vol. 9, No.14, PP.76-89 (Iraqi Conference of Physics) **(2011)**	**Ahmed Abdul-Razzaq Selman**
22.	Systematics of (Gamma-N) Reaction with Light Nuclei-Part I.	International Journal of Scientific and Engineering Research; 4(12):2021-2028 (**2013**).	**Ahmed Abdul-Razzaq Selman**
23.	A Note on Integro-Differential Explicit Method of the Master Equation Solution	International Journal of Scientific and Engineering Research; 4(11) pp. 156-165, (**2013**).	**Ahmed Abdul-Razzaq Selman**
24.	The Physical Properties of Halley Comet Tail Using Mid-point Leapfrog Explicit Method.	International Journal of Scientific and Engineering Research; 4(7), pp. 93-42, (**2013**).	Salman Z. Khalaf, **Ahmed A. Selman**, Elaf E. Abd_Al lattef
25.	Morphometric Properties of Bulkana (Naft Khanah) North-East Iraq from Topographic	International Journal of Current Engineering and Technology, Vol.4, No.1, pp.45-51 (**2014**)	Mostfa A. Hassan, **Ahmed A. Selman** and Ammar A. Ghani

	Maps		
26.	Leapfrog Numerical MHD Solution of Hale Bopp Comet	International Journal of Scientific and Engineering Research; 5(1), pp. 2122-2131, (**2014**).	Salman Z. Khalaf, **Ahmed A. Selman**, Elaf E. Abd_Al lattef
27.	X-ray Spectra Analysis of 8p/Tuttle and 103p/Hartley Comets	International Journal of Applied and Natural Sciences; 3(2), pp. 107-114, (**2014**).	Salman Z. Khalaf, **Ahmed A. Selman**, Marwa I. Jaleel
28.	Analysis of Solar Magnetic Field Using the Dynamo Model	International Journal of Scientific and Engineering Research; 5(6), pp. 383-387, (**2014**).	**Ahmed A. Selman**, Samar A. Thabet
29.	The cmeDetect Computer Code for CME Analysis	International Journal of Scientific and Engineering Research; 6(2), pp. 782-790, (**2015**).n	**Ahmed A. Selman** and Zeinab F. Hussein
30.	Estimation of Physical Parameters of Hale Bopp Comet Tail using Mid-point Leapfrog Explicit Method	Accepted for publication at the International J. Astronomy & Astrophysics, (**2015**)n	Salman Z. Khalaf, **Ahmed A. Selman**, Elaf E. Abd_Al lattef
31.	Nuclear Level Density Calculation of Astrophysical Reactions	IOSR Journal of Applied Physics (IOSR-JAP) V8, No.4, pp.43-52 (**2016**)n	**Ahmed A. Selman** and Hamsa Samer
32.	Mass Calculation of Coronal Mass Ejection using Matlab	International Journal of Scientific & Engineering Research Volume 9, Issue 2, pp.445-460, (**2018**)n	**Ahmed A. Selman** and Mays Ahmed
33.	Stellar Reaction Rate Calculation for CNO-cycle Using non-ESM State Density for the Rigel and Procyon	Indian Journal of Natural Sciences (IJONS), Volume VIII (8), Issue 47, pp. 13293-13304 (**2018**)clarivate	Abdullah Ali Abd Al Kareem and **Ahmed A. Selman**
34.	Automatic Detection of Sunspots Size and Activity using Matlab	Iraqi Journal of Science, Vol. 60, No. 2. pp: 411-425, (**2019**)Scopus	Noor Alhuda Kamel, **Ahmed Abdul-Razzaq Selman**
35.	Numerical Calculations of Sunspot Growth, Decay Phases and Area Calculations using Matlab	Indian Journal of Natural Sciences, Vol.9 /Issue 51 / December (**2018**)clarivate	Noor Alhuda Kamel, **Ahmed Abdul-Razzaq Selman**
36.	Calculation of the Interactions between Solar Wind Particles and Cometary Ion Tail	Sci.Int.(Lahore),30(5),729-736, **(2018)**n	Khalid H.Abbas, Salman Z. Khalaf, **Ahmed A. Selman**
37.	Maxwellian-Averaged Neutron Capture Cross-Sections and Thermonuclear Reaction Rates for ^{56,57,58}Fe, ^{59}Co, and ^{60}Ni Isotopes at Astrophysical Energies	Submitted for publication **(2021)**	Lana T.Ali and **Ahmed A. Selman**
38.	Non-Resonant Reaction Rates of ^{13}C $(\alpha,n)^{16}$O and ^{22}Ne$(\alpha,n)^{25}$Mg in AGB Stars	Submitted for publication **(2021)**	Lana T. Ali and **Ahmed A. Selman**

Books

Yer	Title
2012	**Preequilibrium Nuclear Reactions Using the Exciton Model: Review and Applications.** 01/2012; Lambert Academic Publishing., ISBN: 9783659135941
2012	**Positron Lifetime Changes in Gamma- and Beta-Irradiated Polymers: Some Experimental Applications and Investigations.** First 01/2012; Lambert Academic Publishing., ISBN: 9783843372183
2012	**The Exciton Model: Part I. Basic Calculations of Nuclear Level Density.** 01/2012; Lambert Academic Publishing., ISBN: 9783659157042
2012	**The Exciton Model Part II: Non-ESM Level Density and Model Outline.** 01/2012; Lambert Academic Publishing., ISBN: 9783659217678
2013	**Titan Moon: Frozen Earth Twin** **(in Arabic, unpublished)** **القمر تيتان – أكبر أقمار كوكب زحل وتوأم الأرض الجامد (باللغة العربية)** مؤلف لكتاب مصور – مكتمل لكن غير منشور
2015	**The Exciton Model Part III: Master Equation -Theory and Solution Methods (unpublished)**
2018	**Time Travel** **(in Arabic, unfinished)** **السفر في الزمن (باللغة العربية)**
2018	**Insights about Extraterrestrial Life** **(in Arabic, unfinished)** **قراءات في الحياة خارج كوكب الأرض (باللغة العربية)** كتاب عام قيد التأليف
2020	**Matlab for Astronomy and Physics Students** **(unfinished)**

Languages

- ✓ Arabic (Native)
- ✓ English (Fluent)
- ✓ Spanish (Basic)

Reference Links

Google Scholar: https://scholar.google.com/citations?user=TwoAY4wAAAAJ&hl=en
RG: https://www.researchgate.net/profile/Ahmed-Aselman
Matlab Central: https://ww2.mathworks.cn/matlabcentral/profile/authors/3757572
Academia: https://scbaghdad.academia.edu/AhmedASelman
Books on Amazon: here