

Curriculum Vitae

Name Prof. Dr. Laith A bdul Aziz. AL-Ani
Nationality Iraqi

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Date of Birthday December 6, 1962



1- Academic Qualifications:

<i>Sept.1980 - June.1984</i>	University of Baghdad, College of Science, Department of Physics, B.Sc. in Physics.
<i>Sep.1987 - Dec.1989</i>	University of Baghdad, College of Science, Department of Physics, M.Sc. in Physics. Thesis title: Study of Gamma Ray Buildup Factor in Different Materials
<i>Sept.1992 - Oct.1996</i>	Al Nahrain University, College of Science, Department of Physics, Ph.D. in Physics. Thesis title: Classification of Digital Satellite Images

2- Research Interests

1 -	Remote Sensing and Digital Image Processing: Research fields: Classification, Coloring, Segmentation of Digital Images
2 -	Nuclear Physics: Gamma Ray build up factor, Positron lifetime technique
3 -	Mathematical modeling: Sound and voice signal processing

3- Positions Held:

- *Dean of the College of Science, University of Al Nahrain April 2003- October 2011*
- *Editor in chief of Journal of Al- Nahrain University – Science April 2003-*
- *Member of the Senate of the University of Al- Nahrain April 2003- October 2011*
- *Chairman of the Board of the College of Science April 2003- October 2011*
- *Chairman of the Advisory Office in the College of Science April 2003- October 2011*
- *Chairman of the Committee of Deans of Iraqi Science Colleges, April 2008- October 2011*

4- Experiences:

July.1990 – June 1996	Assistant lecturer in Dept. of Physics, College of Science, Al Nahrain University.		
June 1996 - June 2000	Lecturer in Dept. of Physics, College of Science, Al Nahrain University, Teaching:		
	Material	Undergraduate	Postgraduate
	1- Programming	*	
	2- Nuclear Physics	*	
	3- Numerical Analysis	*	
	4- Quantum Mechanics	*	*
	5- Image Processing		*
	6- Remote Sensing		*
	7- Mathematical Physics		*
8- Radiation Physics		*	
June 2000 –December 2012	Assistant Professor in Dept. of Physics, College of Science, Al Nahrain University , Teaching:		
	Material	Undergraduate	Postgraduate
	1- Programming	*	
	2- Nuclear Physics	*	
	3- Numerical Analysis	*	
	4- Quantum Mechanics	*	*
	5- Image Processing		*
	6- Remote Sensing		*
	7- Mathematical Physics		*
	8- Radiation Physics		*
9- Pattern Recognition		*	
December 2012 -	Professor in Dept. of Physics, College of Science, Al Nahrain University, Teaching:		
	Material	Undergraduate	Postgraduate
	1- Nuclear Physics	*	*
	4- Quantum Mechanics	*	*
	5- Image Processing	*	*
	6- Remote Sensing	*	*
	8- Neutron physics		*
9- Ion Physics		*	

5- Academic Supervision:

28 M. Sc. Dissertation see annex-A) and 6 PH. D thesis (see annex-B) in the field of digital image processing, Remote sensing, simulation and modeling and experimental nuclear Physics

6- Books:

- 1- Shatha. S. Al Dargaselli, A. A. Ali, and Laith. A. Al-Ani, *Radiation Physics*, Book in Arabic
- 2- Marwa S. Mahdi, Laith A. Al-Ani, Loay E. George “*Simulation of Dose Buildup factor of Gamma Ray Including Annihilation for Aluminum and Lead*”, Lambert Academic Publishing, 2016, GERMANY

7- Last 5 Published Papers:

- 1- *Laith A. Ani*, “**Image Integration Based Ant Colony System for Multiband Satellite Image Classification**”, J. of Al-Nahrain University, Vol.15 No.1 pp.171-178 (2013)
- 2- *Loay A.Gorge, Laith A.Al-Ani, Alyaa H.Ali*, **Cloud Height Classification Using Texture Analysis of Meteosat images**, Journal of Baghdad for Science,. Vol.11, No.2., 2014.
- 3- *Laith A. Al-Ani, Loay E. Goarge and Marwa S. Mahdi*, **Gamma Ray Buildup Factor for Finite Media in Energy Range (4-10) MeV for Al and Pb**, Journal of Al-Nahrain University Vol.18 (1), March, 2015, pp.88-95 Science
- 4- *Ali H. Taqi., Laith A. Al-Ani , Abbas M. Ali*, “**Assessment of the natural radioactivity levels in Kirkuk oil field**”, Journal of Radiation Research and Applied Sciences Vol. 9, PP. 337- 344 (2016)
- 5- *Saad N. Abood, Laith A. Al-Ani and Ammar A. Alrawi* ,”**Nuclear structure and electromagnetic transition probability of Hf isotopes by means IBM-1**”, Advances in Applied Science Research, 2016, 7(2): 16-26

8- Published Papers:

- 1- L.A.Al-Ani, S. M. Ali, and L. S. Al Ali, **Principal Component Analysis for TM Landsat Data for RAMADI Scene (West of IRAQ)**, *Proceeding of the First Scientific Conference Vol. 1 December 1997 PP.155-166 College of Science - Saddam University*,
- 2- A.A.Al-Ani, S.M.Ali:and L.A.Al-Ani, **Qualitative and quantitative comparison study between short- and long-exposure imaging**. J. of Saddam University, Vol.2 No.1 pp.83-111 (1998).
- 3- A.A.Al-Ani, L.A.Al-Ani and S.M.Ali, **Entropy as a measure of degradation effects**. J. of Saddam University, Vol.2 No.1 pp.113-136 (1998)
- 5- R. A. Radihi, F. A. Majeed, and L.A.Al-Ani, **Inelastic Electron Scattering Form Factors for the Positive and Negative Party States of C-12 in the Frame work of Particle Hole Configurations**, J. of Saddam University, Vol.4 No.2 pp.131-137 (2000)
- 6- F. A. Majeed, R. A. Radihi, and L.A.Al-Ani, **Eigen Value and Eigen Vectors of the Iso-Vector $T=1$ Particle Hole State in C-12**, J. of Saddam University, Vol.5 No.1 pp.145-145 (2001).
- 7- L.A.Al-Ani, **Measured Buildup Factor for Gamma Rays in Shielding Materials**, J. of Saddam University, Vol.5 No.1 pp.181-191 (2001).
- 8- M. M. Elias, L. A. Al Ani, and K. I. Shmaia, **Isothermal Annealing of Defects in Deformed Cu-Zn Alloy Probed by the Positron Lifetime Technique**, first Symposium on Heat Treatment of metals and Alloys, 3-5 Nov. 2001, Cairo.
- 9- L. A. Al Ani, M. M. Elias, and K. I. Shmaia, **Thermal Recovery of Defects in Aluminum Probed by Positron Lifetime Technique**, Sixth Arab Conference on the Peaceful uses of Atomic Energy 14-18 Dec. 2002, Cairo.
- 10- L. A. Al-Ani, A. A. Al-Ani, and A. H. Ali, **Monitoring the flooded areas by principal component analysis of multi-temporal land sat Thematic Mapper images**, J. of Al-Nahrain University, Vol.7 No.1 pp.153-160 (2004).
- 11- L. A. Al-Ani, B. K. Al-Aboudi, and M. S. Mahdi, **Fractal Image Segmentation Based on Horizontal- vertical Partitioning** , Iraqi J. Sci. Vol. 45, No.1 pp.23-30 (2004).
- 12- A. K. Ahmad, L. A. Al-Ani, and Y. A. Jasim, **Computer Adid System for Diagnois the Myocardial Heart Diseases**, J. of Al-Nahrain University, Vol.7 No.1 pp.153-160 (2004).
- 13- L. A. George, L. A. Al-Ani, and M. S. Mahdi, **Speaker Verification based Fractal Geometry**, Iraqi J. Sci. Vol. 47, No.1 pp.203-207 (2006).
- 14- L. A. Al-Ani, A. A. Al-Ani, A. H. Ali, **Principal Component Analysis of Multi-Temporal Image Pairs**, Iraqi J. Sci. Vol. 47, No.1 pp.220-226 (2006).
- 15- A. K. Ahmad, L. A. Al-Ani, and Y. A. Jasim, **Computer aided system for diagnosis the arrhythmia heart diseases**, J. of Al-Nahrain University, Vol.7 No.1 pp.153-160 (2006).
- 16- L. A. Al-Ani, **Satellite image classification based fractal**, J. of Al-Nahrain University, Vol.10 No.1 pp.153-160 (2007)
- 17- Walid A. Al-Jawher, Laith A.Al-Ani, Nada N. Al-Ramahi, **Hybrid Transformation Based Automatic Image Identification**, the first international conference on digital communications and applications DCCA 2007 in Amman March 19-22

- 18- *Laith A. Ani, Loay E. George, Jazeel H. Azeez, An Improved Method for the determination of airplane Radial Velocity using Doppler Shift*, Iraqi J. of Physics. Vol. 8, No.13 pp.89-96 (2010).
- 19- *M. M. Elias, Laith A. Ani, Milad J. Ali, "Monte Carlo Simulation for Bremsstrahlung Buildup Factor Produced by Absorption of Y-91 Beta Rays"*, Iraqi J. of Physics. Vol. 9, No.14 pp.31-38 (2011).
- 20- *Laith A. Ani, Mohamed. S. Mahdi, Multiband and Image Classification using KLT and Fractal Classifier* J. of Al-Nahrain University, Vol.14 No.1 pp.171-178 (2011)
- 21- *Laith A. Ani, "Image Integration Based Ant Colony System for Multiband Satellite Image Classification"*, J. of Al-Nahrain University, Vol.15 No.1 pp.171-178 (2013)
- 22- *Loay A.Gorge, Laith A.Al-Ani, Alyaa H.Ali, Cloud Height Classification Using Texture Analysis of Meteosat images*, Journal of Baghdad for Science,. Vol.11, No.2., 2014.
- 24- *Laith A. Al-Ani, Loay E. Goarge and Marwa S. Mahdi, Gamma Ray Buildup Factor for Finite Media in Energy Range (4-10) MeV for Al and Pb*, Journal of Al-Nahrain University Vol.18 (1), March, 2015, pp.88-95 Science
- 25- *Ali H. Taqi,, Laith A. Al-Ani, Abbas M. Ali, "Assessment of the natural radioactivity levels in Kirkuk oil field"*, Journal of Radiation Research and Applied Sciences Vol. 9, PP. 337- 344 (2016)
- 26- *Saad N. Abood, Laith A. Al-Ani and Ammar A. Alrawi, "Nuclear structure and electromagnetic transition probability of Hf isotopes by means IBM-1"*, Advances in Applied Science Research, 2016, 7(2): 16-26

Annex- A: M. Sc. Dissertations:

No	Dissertation Titles:	Student Name	Year
1-	Studying the Flooded Area by Principal Component Analysis of Multi Temporal Landsat Thematic Mapper Data	Alyaa H. Ali	1999
2.	Image Noise Removal using K-L Transformation	Zainab A. Al satar	1999
3.	Segmentation and Classification of Digital Images	Nazar I. Seno	1999
4.	Electro Excitation of the ISO Vector (T=1) states of C-12 in the Frame Work of Particle Hole Configuration	Fouad A. Majeed	1999
5.	A study of the Effect of Design Parameters on the Characteristics of NE-104 Plastic Scintillation Detector	Suha M. Khorsheed	1999
6.	Investigation of the Factors Affecting the Time Response Function of Lifetime Spectrometer	Duraïd F. Eleya	1999
7.	Recovery of Defects in Deformed Metals and Alloys Probed by Positron Lifetime Technique	Khawla I. Shmaia	2000
8.	An Automated System for Multi-Lead and Single Lead Electrocardiogram Analysis	Yassir A. Jasim	2000
9.	A study of Coherent States for A charged Oscillator in Electric and Magnetic Fields	Omar A. Jalal	2001
10.	Analytical Study for the Methods using Voice for Determining the Radial Velocity of the Airplane	Ahmed S. Mahmood	2001
11.	Quantitative Analysis on Using Fractals for sound Signal Processing	Mohammed S. Mahdi	2001
12.	Modified Edge Detector for Colored Images	Rana A. Al Juboury	2001
13.	Measured and Calculation of Gamma Ray Buildup Factor in Single and Multi Layer Shields	Khalid O. Al Baiti	2001
14.	A Simplified Model of Geomagnetic Field in IRAQ	Waseem B. Al Hamadany	2002
15.	Experimental Studies of Edge and Corner Detectors	Asmaa S. Abdul Jabar	2002
16.	Classification of Digital Satellite Images using Selective Bands and Principal Component Analysis	Alyaa H. Al Sepahe	2002
17.	Change Detection Using Fuzzy Logic and Neural Net Work	Dheya K. Mehdy	2002
18.	A study of Transfer Factor of Radio Nuclides from Soil to Plant	Zainab K. Nassir Allah	2003
19	Monte Carlo Method Calculation for Build up Factoring Different Materials	Ammar A. Al Rawi	2004
20	Mathematical Model of a Graded Band Gap CdSx Te1-x/CdTe Solar Cell	Belal Abd AlSattar	2004
21	Effect of Re-sampling and Re-quantization on the Compression of Digital Audio Data	Shereen A. Al Samarai	2005
22	Fractal Audio Compression	Wesam Fawzi Jassim	2005

No	Dissertation Titles:	Student Name	Year
23	Statistical Textural Features Analysis for Gray Images	Sara. A. Asem	2006
24	Arabic Character Recognition Based on Moment Method	Ragad Al Khalidy	2008
25	Computational study for gamma ray build-up factor for multi-layered slab shield in finite media.	Huda Alaa Maki	2009
26	Iris Recognition Based on Segmentic Indexing	Ansam Ahmed	2011
27	Simulation of Dose Buildup factor of Gamma Ray Including Annihilation for Aluminum and Lead	Marwa S. Mahdi	2014
28	Supervised and Un Supervised Classification Performance of Satellite Images	Hassan Salem	2016

Annex- B: Ph.D. Thesis:

No	Thesis Titles:	Student Name	Year
1	A Theoretical Investigation of the Correlation Energy of the Li-Atom	Mohamed A. Al-Kaabi	2004
2	Clouds Height Classification using Texture Analysis of Meteo-Sat Images	Alyaa H. Ali	2004
3	Development of a content based image retrieval system	Mahdi Kzar	2006
4	Dynamic Navigation for UAV	M. S. Mahdi	2007
5	Application of coupled cluster model in light nuclei	Alyaa H. Al Sepahe	2008
6	Simulation and Measurements of Microscopic Free – Volumes in Polymers Using Positron Annihilation Lifetime Spectroscopy Techniques { PALS }	Jamal Mohammed	2016