

Curriculum Vitae

Prof. Dr. Ayad A. Al-Ani



Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

ayad.aziz@sc.nahrainuniv.edu.iq

drayadalani@gmail.com

drayadalani61@yahoo.com

+9647707976601

+9647901377181

PROFESSIONAL SUMMARY

I am Prof. Dr. Ayad A. Al-Ani, a University Physics Professor with more than 35 years of Professional experience (Teaching, Supervisions, Research, Consulting, and Scientific Committees). Currently, I am professor of Digital Image Processing and Mathematical Modeling. Fields of my interest are: Digital Image Processing, Mathematical Modelling, and Astrophysics. I supervised: 11 Ph.D., 30 M.Sc., theses, and 35 undergraduate, student's projects. Moreover, I published: 62 papers and 4 books, and 2 books under printing. Previously, I was University Vice President of Administrative Affairs/Al-Nahrain University, Deputy Dean of Post Graduate Studies and Scientific Research/Baghdad University, and Head of Space and Astronomy Department/Baghdad University. Finally, I was born in 5 July 1961, married with two children.

Key Skills

- Experience in teaching different subjects for postgraduates and under undergraduates studies
- Experience in teaching different subjects for under undergraduates studies
- Experience in supervision Ph.D. and M.Sc. student's projects
- Experience in supervision graduation projects for undergraduates. students
- Highly experience in administration
- Arabic and English, languages
- Experience in software programming
- Experience in Education Development and Planning

EDUCATION

Doctor of Philosophy, Physics (Digital Image Processing)

Obtained 4/12/1995

Department of Physics, College of Science, Baghdad University. Baghdad-Iraq

Thesis Title: *Restoration of atmospherically degraded images*

Master of Science, Physics (Mathematical Modelling)

Obtained 12/12/1990

Department of Physics, College of Science, Baghdad University. Baghdad-Iraq

Thesis Title: *Simulation program to study the effects of atmospheric turbulence and optical defects on astronomical images*

Bachelor of Science, Physics

Graduated 30/6/1983

SCIENTIFIC TITLES

Professor	1 / 11 / 2006
Assistant Professor	30 / 4 / 1998
Lecturer	7 / 6 / 1994
Assistant Lecturer	5 / 9 / 1991
Assistant Physicist	13 / 6 / 1984
First Employment	16 / 9 / 1983

PROFESSIONAL EXPERIENCE

Professor 1/11/2006 –to date

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

- Supervised: **5** Ph.D. students
- Supervised: **10** M.Sc. students
- Supervised: **12** graduation projects
- **Taught: for post graduate studies:** Digital Image Processing, Fourier Optics, Statistical Optics, Mathematical Physics, statistical Physics, Application of Fourier transforms, Mathematical Modelling, Astrophysics, and Space-Time Geometry.
- **Taught: for undergraduate studies:** Optics, Mathematical Physics, and Thermodynamics.

Assistant Professor 28/12/2003 – 31/10/2006

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

- Supervised: 1 Ph.D. students
- Supervised: **5** M.Sc. students
- Supervised: **6** graduation projects
- **Taught: for post graduate studies:** Fourier Optics, Mathematical Physics, and Statistical Physics.
- **Taught: for undergraduate studies:** Mathematical Physics and Thermodynamics.

Assistant Professor 30/4/1998 – 27/12/2003

Department of Space and Astronomy, College of Science, Baghdad University, Baghdad-Iraq

- Supervised: **5** Ph.D. students
- Supervised: **14** M.Sc. students
- Supervised: **12** graduation projects
- **Taught: for post graduate studies:** Digital Image Processing, Astrophysics, Fourier Optics, and Mathematical Physics.
- **Taught: for undergraduate studies:** Digital Image Processing, Optics, and Numerical Analysis.

Lecturer 7/6/1994– 9/4/1998

Department of Physics, College of Science, Baghdad University, Baghdad-Iraq

- Supervised: **4** graduation projects
- **Taught: for undergraduate studies:** Optics, Mathematical Physics, Mathematics, and Physics of the Waves, Computer Programming, and Numerical Analysis.
- Supervisor of Numerical Analysis Laboratory.

Assistant Lecturer**5/9/1991–6/6/1994****Department of Physics, College of Science, Baghdad University, Baghdad-Iraq**

- Numerical analysis laboratory.
- General physics laboratory and Computer laboratory.

Assistant Physicist**24/10/1990– 4/9/1991****Department of Physics, College of Science, Baghdad University, Baghdad-Iraq****Assistant Physicist****3/1/1990– 23/10/1990****Ministry of Higher Education & Scientific Research, Baghdad-Iraq****Assistant Physicist****13/6/ 1984–2/1/1990****Astronomy and Space Research Center / Scientific Research Council, Baghdad-Iraq**

- A training course in Zeiss company-West Germany including: UBVRI-photometer, IR-Photometer, Guiding Telescope and Coud'- Echelle Spectrograph, Cassegrain spectrograph.
- Staff member – Instrumentation Unit / Iraqi National Astronomical Observatory.

ADMINISTRATION POSITIONS

University Vice President of administrative affairs**28/12/2003–30/10/2004**

Al-Nahrain University, Baghdad - Iraq

Deputy Dean of post graduate studies and scientific research**15/1/2002–1/6/2003**

College of Science, Baghdad University, Baghdad - Iraq

Head of Space and Astronomy Department**10/11/1999–28/7/2003**

College of Science, Baghdad University, Baghdad - Iraq

Academic responsible for post graduate studies**2/5/1998 – 1/9/2003**

Department of Space and Astronomy, College of Science, Baghdad University

Academic responsible for post graduate studies**1/3/1996 – 1/5/1998**

Department of Physics, College of Science, Baghdad University

FIELD OF INTERST

Digital image processing, Statistical Physics, Mathematical Physics and Modelling, and Astrophysics.

AWARDS

Obtained honours of the "Scientific Academics" of Ministry of Higher Education and Scientific Research, in the field of Physics, for activities and creativities for two years successively, 2001 and 2002.

ASSOCIATIONS AND UNIONS:

1. Establishment member and Board member of Association University Lecturers
2. President of Nida'a Al-Hurriyah Center for Development and capacity Building
3. Establishment member and Vice President of Al-Ghad Organization for Science and Development Community
4. Establishment member of Afkar Center for Strategic Studies and Development
5. Membership of Scientific and Cultural Forum in Fallujah
6. Membership of Arabic Union of Astronomy and Space Sciences
7. Membership of Iraqi association for Physicists and Mathematics
8. Membership of Arabic Union for Physicists and Mathematics
9. Membership of outer space staff for peaceful purposes

JOINT MINISTERIAL AND UNIVERSITY COMMITTEES:

1. Member of Promotion Committee / College of Science / Nahrain University
2. Member of the objections committee for central promotions / Nahrain University
3. Member of the university committee to standardize procedures for Examine the postgraduate thesis / letters / Nahrain University
4. Member of the ministerial committee to evaluate the recommendations of conferences and seminars held by the Ministry of Higher Education
5. Member of the university committee for evaluation and testing of graduates of Ukrainian universities
6. Member of developing the curriculum of physics sciences in the College of Science / University of Nahrain
7. Member of the Board of Nahrain University
8. Rapporteur of the Council of the University of Nahrain
9. Member of the State Consultative Council for the establishment of the Astronomical Observatory
10. Chairman of the Committee for the Development of Astronomy and Space Science Research Unit at the College of Science
11. Chairman of the Committee for the Development Centers of Space Observatories in Iraq
12. Chairman of the Committee to develop Departments of space and astronomy science in Iraqi universities
13. Chairman of the Rehabilitation Committee of the Iraqi National Astronomical Observatory
14. Chairman of the Rehabilitation Committee of the Al-Battani Astronomical Observatory
15. Chairman of the Committee for the establishment of a College of Astronomy and Space
16. Member of the Committee for the purchase of equipment for the Department of Space and Astronomy / College of Science
17. Chairman of the site selection committee for the establishment of the Iraqi Astronomical Observatory
18. Chairman of the committees on the curricula of space and astronomy
19. Member of the Committee for the Development of the Department of Space Science and Astronomy at the College of Science
20. Member of the Iraqi National Astronomical Observatory
21. Member of the Astronomical Observatory of Al-Battani

MEMBERSHIP IN EDITORIAL AND CONSULTATIVE BODIES IN SCIENTIFIC JOURNALS:

1. Member of the editorial board of the Journal of Faculty of Science / Al-Nahrain University
2. Member of the Advisory Committee of the Journal of the Association of Colleges of Science in Arab Universities/ Bahrain, Journal of the Association of Arab Universities for Basic and Applied Science (JAAUBAS)
3. Member of the Advisory Committee of the Journal of Educational and Scientific Studies / Iraqi University
4. Member of the Advisory Committee for the Journal of Nida'a Al-Hurriyah for Training and Human Development
5. Member of the Advisory Committee of the Iraqi Journal of Industrial Research / Industrial Research and Development Authority / Ministry of Industry and Minerals

ACADEMIC SUPERVISION

Ph. D. THESES:

1. Iris Recognition Using PCA and ICA techniques.
2. Relativistic Hartree-Fock Computations of Group 15 Atoms and Some Diatomic Molecules.
3. Constructing a Mathematical-Statistical Model of Wind Potential in Iraq Using Different Weibull Distribution Functions
4. Statistical Mechanics & Thermodynamics properties of Bose-Einstein Condensation in Fractal media.
5. Design and implementation of location determination system by using sound.
6. Ray Trace Algorithms for Evaluating and optimizing the performance of All-Reflecting Astronomical Telescope.
7. Formulation of Theoretical models for star Distribution in Galaxies.
8. Analytical Study for International Model for Long-Distance Radio waves Propagation.
9. Effect of Thermally Turbulent Aerial path on Laser Propagation and Image Characteristics.
10. Anomalous Diffusion in Pulsar Atmosphere.
11. Theoretical Microbial Models for interstellar grains.

M. Sc. THESES

1. Study The Effects of Regularization Parameters within non-Blind Deconvolution algorithm.
2. Image Retrieval Using Mead's algorithm.
3. Image Restoration Using an iterative method.
4. On the Chromatic Field Aberration of Magnetic Lenses With a Fields of the Form $B(z) \propto z^n$, $n=2,3$.
5. Simulation of acousto-optic device for photonic system.
6. High Hiding Rate Image Steganography System Based on Affiant Transform and LSB Method.
7. Band Ratios and indices of multispectral satellite images for classification accuracy.
8. Image Restoration Using Modified Iterative Techniques.
9. A computational investigation on the effect of lens material on the aberration of an Infrared optical system.
10. Analytical study for strong and micro-lensing in some Gravitational lensing system.
11. Cosmological Applications of Gravitational Lensing.
12. Effects of turbulence on low orbit satellite parameters.
13. Modified Centring Algorithms for Astronomical Images.
14. Analytical study for thermal images processing techniques used for targets detection.
15. Targets Detection Using Sound Processing Techniques.
16. Mathematical Models for Determining the Charge Distribution in Ionosphere Region.
17. Effect of F2 layer on HF communication far meters.
18. Design and construction of near IR hazer beam diagnosing and analysing system.
19. Sectional form Determination for Gregorian's Telescope.
20. Analytical Study for Locations determination methods for moving objects.
21. Analytical Studies for Geometrical Formation methods.
22. Image Deblurring Using polynomial Transform.
23. Maximum a Posteriori Filter For restoration Speckle Images.
24. English Characters Recognition using Co-Occurrence and moments criteria.
25. Sharpening Digital Images by using Polynomial Transform.
26. Estimation of Uniform parameter and Image Restoration.
27. Segmentation and Classification of Digital Images.
28. Studying the flooded Area by Principal Component Analysis of Multi Temporal Landsat Thematic Mapper Data.
29. Linear Digital restoration filters.
30. An Adaptive Iterative image restoration techniques.

BOOKS PUBLICATIONS

- 1. A Simplified Model for HF radio Wave Propagation of Middle East Region,**
Khalid A. Hadi, Loay E. George, and Ayad A. Al-Ani
Space Physics, Verlag Publisher, Scholar's Pres, Herstellung: siehe letzte Seite, Deutschland – Germany, ISBN: 978-3-639-66126-2 / copyright © 2014 OmniScriptum GmbH & Co. KG
- 2. Wind Energy- The Mathematical and Statistical Basis**
Firas A. Hadi, Ayad A. Al-Ani, and Mohammed A. Saleh, Verlag Publisher, LAP LAMPERT Academic Publishing, Herstellung: siehe letzte Seite, Deutschland – Germany, ISBN : 978-3-659-69677-0copyright © 2015 OmniScriptum GmbH & Co. KG
- 3. Relativistic Properties for Atoms in Group 15**
Bilal Jasim and Ayad A. Al-Ani,
Verlag Publisher, LAP LAMPERT Academic Publishing, Herstellung: siehe letzte Seite, Deutschland – Germany, ISBN : 978-3-330-00049-0- copyright © 2016 OmniScriptum GmbH & Co. KG
- 4. Restoration of Digital Images Using an Iterative Tikhonov-Miller Filter**
HalaK. Hassan and Ayad A. Al-Ani
Verlag Publisher, LAP LAMPERT Academic Publishing, Herstellung: siehe letzte Seite, Deutschland – Germany, ISBN : 978-3-330-08266-3- copyright © 2017 OmniScriptum GmbH & Co. KG
- 5. Philosophy and Physics of the Black-Holes,** Ayad A. Al-Ani, **In Printing**
- 6. Physics of the Neutron Stars,** Ayad A. Al-Ani, **In Printing**

PUBLICATIONS

- 1- Y. A. Jasim, L.A. Al-Ani, and A. A. Al-Ani, Iris Recognition Using Principle Component Analysis, Acceptable and Represented in 1st Annual International Conference for Information and Science "AICIS", IEEE recorded No. 46152, 19-21 Nov. 2018, Fallujah University, Iraq.**
- 2- A. H. Sheer and A. A. Al-Ani, The Effect of Regularization Parameter within non-Blind Restoration Algorithm using Modified Iterative wiener Filter For Medical Images, Acceptable and Represented in 1st Annual International Conference for Information and Science "AICIS", IEEE recorded No. 46152, 19-21 Nov. 2018, Fallujah University, Iraq.**
- 3- A. A. Al-Ani, Mohammed S. Mahdi, and Sally. A. Al-Rubaie, Color Image Restoration using Iterative Mead's Filter, J. of Al-Nahrain University-Science Vol. (), , pp. ()**
- 4- A. A. Al-Ani, Mohammed S. Mahdi, and Sally A. Al-Rubaie, J. of Al-Nahrain University-Science**
- 5- A. A. Al-Ani, Mohammed S. Mahdi, and Sally A. Al-Rubaie, Digital Images Retrieval Using Iterative Technique, International Research Journal of Advanced Engineering and Science (IRJAES)**
- 6- A. A. Al-Ani, Mohammed S. Mahdi, and Sally. A. Al-Rubaie, Review of linear image degradation and image restoration technique, Asian Journal of Computer Science Engineering**
- 7- Ihsan O. M. Sa'aed and A. A. Al-Ani, السياسات المستقبلية للتعليم العالي والبحث العلمي في العراق في ضوء أهداف التنمية المستدامة, (المجال الثالث (الهندسة القيمة والسياسات)**
- 8- Abdul Salam A. H. Al-Noori and A. A. Al-Ani, جاهزية جامعة الفلوجة للاعتماد وضمان الجودة وفق معايير اتحاد الجامعات العربية: حالة, 13-14 December 2107**
- 9- A. A. Al-Ani and Hala K Al-Kazi, Image Restoration Using Modified Iterative Tikhonov-Miller Algorithm, International Journal of Scientific and Engineering Research, Vol. 7, Issue 12, January 2017 1243 ISSN 2229-5518**
- 10- A. A. Al-Ani and Hala K. Hadi, Restoration of Digital Images Using an Iterative Filter Algorithm, Iraqi Journal of Science, 2017, Vol. 58 No. 18 pp.: 377-387 DOI: 10.24996. ijs. Feb. 2017.58.1B.20**
- 11- B. K. Al-Mashadany, A. A. Al-Ani, and S. N. Abood, Using Gaussian Basis-Set and with Gaussian Nuclear Charge Distribution to Solve Dirac-Hartree-Fock Equation for ⁸³Bi - Atom, Accepted J. of Al-Nahrain University-Science (2016)**
- 12- B. K. Al-Mashadany, A. A. Al-Ani, and S. N. Abood , Correction Four-Component Dirac-Columb using Gaussian Basis-Set and Gaussian Model Distribution for Super Heavy Element (Z=115), Iraqi Journal of Applied Physics, Vol. (12) Issue (1) January-March 2016 pp. 17-21**
- 13- M. A. Saleh, A. A. Al-Ani, and F.A. Hadi, Ambient Turbulence Intensity Calculation for Al-Nasiriyah Province in Iraq, Iraqi J. of Science -Baghdad University**
- 14- A. A. Al-Ani, M. A. Saleh, F.A. Hadi, and R. A. Abdulwahab, Weibull Distribution Parameters and Wind Power Assessment for three Locations in Iraq, Iraqi J. of Science -Baghdad University**
- 15- A. A. Al-Ani, الجامعة العراقية للمدة من , المؤتمر الدولي " الإسهام الحضاري لإعلام العراق في القرن العشرين , عالم الفيزياء النظرية عبد الجبار عبد الله, ٢٠١٤ / ١ / ٩ – ٨**

- 16- Khalid A. Hadi, Loay A. George, and A. A. Al-Ani, **A Simplified Model for HF Radio Wave Propagation for Middle East Region**, International Journal of Physics and Astronomy, ISSN: 2051-6851, Vol. 27 Issue. 1, March, pp.1129-1135, **Impact factor: 2.119. (2014)**
- 17- Khalid A. Hadi, Loay A. George, and Ayad A. Al-Ani, **Analytical Study for an International Model of Long Distance Radio Wave Propagation**, International Journal of Enhanced Research in Science Technology and Engineering, ISSN : 2319 -7463, Vol. 3, Issue 3, March, pp. 417-426, **Impact factor : 1.252, (2014)**
- 18- A. A. Al-Ani, M. S. Ahmed and M. S. Yousif, **Design and Construct a Beam Profile of Near IR Laser Based on CCD Camera**, J. of Al-Nahrain University-Science Vol.17 (1), March, pp.82-88 (2014)
- 19- Bahaa A. H. Jawad, A. A. Al-Ani, and Oday A. Hussein, **The Chromatic Field Aberration of Monopole, Dipole and Quadrupole Magnetic Lenses**, Asian Transactions on Fundamentals of Electronics, Communication and Multimedia, Vol.(2), Issue 03 pp.12-17July (2012)
- 20- A. K. Ahmed and A. A. Al-Ani, **Application of Strong-Lensing for some Gravitational Lenses**, J. of Al-Nahrain University-Science Vol.10(2), December, pp.73-76 (2008)
- 21- A. A. Al-Ani, **Reconstruction of Satellite Images using modified Statistical Iterative Technique**, J. of Al-Nahrain University-Science Vol.10 (2), June, pp.60-72 (2007)
- 22- H. F. Al-Baldawi and A. A. Al-Ani, **A Computational investigation of Lens Material of An Infrared Optical System**, J. of Al-Nahrain University-Science Vol.10 (2), June, pp.49-54 (2007)
- 23- A. M. Al-Ani, A. A. Al-Ani, and M. A. Saleh., **Determination of the Hubble constant in the presence of Shear and non-Isothermal Models**, J. of Al-Nahrain University-Science Vol.9 (2) Dec. pp.111-115 (2006)
- 24- A. A. Al-Ani, **Restoration of Astronomical images Using an adaptive Iterative Wiener Filter**, J. of Al-Nahrain University-Science Vol.8 (2), pp.75-79 (2006)
- 25- A. A. Al-Ani, **An adaptive iterative image restoration Using Projection onto convex Sets method**, The fourth Saudi Technical Conference and Exhibition, Vol. IV, pp.272-278, (2006)
- 26- W. R. Al-Azawi, A. Talib, and A. A. Al-Ani, **The effects on the perception of a thermal image by a human observer**, ATTI Delta " Fondazione Giorgio Ronchi", Scienza Delta Vision, ANNO LX. No.3, pp.475-484 (2005)
- 27- 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.134-138, (2004).
- 28- S. K. J. Al-Ani, A. A. Al-Ani, and S.R. Al-Ani, **Enhancement blurred Images by Using Conventional Filters**, Iraqi J. of Science Vol.45E, No.1, pp.88-106 (2004)
- 29- A. A. Al-Ani, L. A. Jorj and I. K. Ugeib, **Analytical Study For Geometrical Enlarge Transform Using Lagrange and Cubic Spline Interpolation**, J. of Science and engineering, vol.3, pp.45-51, (2003)
- 30- A. A. Al-Ani, **Design New Filter for Linear Image Restoration**, Iraqi J. of Science Vol.44 E, No.1, pp114-129 (2003)
- 31- L. K. Abood, A. A. Al-Ani, and R N. Hassan, **Estimation of Optimal Location of signal Source using Modified optimization method**, Iraqi J. of Science Vol.44 E, No.1, pp130-145 (2003)
- 32- L. K. Abood, A. A. Al-Ani, and F. A. Hadi, **Deblurring Digital Images using Hermit Polynomial approximation**, Iraqi J. of Science Vol.44 E, No.1, pp 100-113 (2003)
- 33- A. A. Al-Ani, **An Adaptive Edge Detection Techniques for Simulated SAR Images Smoothed by Median Filter**, Iraqi J. of Science Vol.43 E No.1 pp.1-13 (2002)
- 34- N. Isamat, L. A. Al-Ani and A. A. Al-Ani, **Image Segmentation Using Modified Split and merge Method**, 2nd scientific conference, College of Science, University of Baghdad, (22-24) march (1999).
- 35- S. M. Ali, A. A. Al-Ani, and S. J. Al-Amri, **Maximum a Posteriori technique For Smoothing Simulated SAR Images**, Iraqi J. of Science Vol.43 E No.1 pp.50-65 (2002).
- 36- A. A. Al-Ani and S. D. Al-Bayaty, **Estimation of Uniform Blur and Noise Parameters**, Iraqi J. of Science Vol.43E No.1 pp.91-103 (2002)
- 37- N. L. Jabir, M. A. Saed and A. A. Al-Ani, **Analysis of the Diffuse Interstellar Bands, Extinction and Linear Polarization of HD2905 (κ -CASSIOPEIAE)**.Iraqi J. of Science Vol.42E, No.2 (2001).
- 38- A. A. Al-Ani, S.K.J. Al-Ani and S. R. H. Al-Ani, **Image Sharpening Using Polynomial Transform Filters**, Iraqi J. of Science Vol.42E No.2 pp.139-158 (2001)
- 39- M. A. Saed, N.L. Jabir, and A. A. Al-Ani, **Infrared Interstellar Extinction and Optical Linear Polarization of Star Lights**. Iraqi J. of Science Vol.42E No.2 pp.50-68 (2001)
- 40- S .M. Ali, A. A. Al-Ani, and E F. Khanjar, **An Adaptive Iterative Technique for Image Restoration**, Iraqi J. of Science Vol.42E No.2 pp.24-35 (2001).
- 41- A. A. Al-Ani, **Image Restoration Using Modified Iterated Wiener and Homomorphic Filters**, Iraqi J. of Science Vol.42E No.2 pp.1-23 (2001)
- 42- A.H AL-Muhamadi and A. A. Al-Ani, **the Relation Between The factors of Probability for the Crescent Moon Visibility**. Iraqi J. of Science Vol.42E No.1 pp.56-68 (2001)
- 43- A. A. Al-Ani, M. A. Saed and N. L. Jabir, **Analysis of the Diffuse Interstellar Bands Observations**. Iraqi J. of Science Vol.41E No.1 pp.39-55 (2001)
- 44- M. A. Saed, A. A. Al-Ani and N. L. Jabir, **Microbial Model for interstellar Extinction and Linear Polarization of HD37903**. Iraqi J. of Science Vol.41E No.1 pp.19-38 (2001)
- 45- M. A. Saed, N. L. Jabir, and A. A. Al-Ani, **Theoretical Microbial Model for interstellar grains in Large Magellanic Cloud**. Iraqi J. of Science Vol.41E No.1 pp.1-18 (2001)
- 46- A. A. Al-Ani and L. A. Al-Ani, **Image Reconstruction For non Isoplanatic Degradations**, J. of Saadam University, Vol.4 No.2 pp.119-130 (2000)

- 47- A. A. Al-Ani, *Estimation of Uniform Blur and noise parameters*, International conference on Research Trends in Science and Technology (RTST 2000) Beirut, Lebanon, March 6-8, 2000 .
- 48- A. A. Al-Ani and A.H AL- Muhamadi, *Maximum Entropy method as a smoothing technique*. Iraqi J. of Science Vol.41C No.4 pp.1-16 (2000).
- 49- A. A. Al-Ani, *Image Restoration For non Isoplanatic Degradations*, 2nd conference for College of Science, (13-14) Nov. 1999, Philadelphia University, Jordan
- 50- A. A. Al-Ani, *Atmospheric turbulence and spherical aberration effects on the resolving power of optical telescopes*. Iraqi J. of Science Vol.41C No.3 pp.47-60 (2000)
- 51- S. K. J. Al-Ani, A. A. Al-Ani, and A.A.K. Al-Luhebi, *Linear Restoration Filter for non Linear Degradations*, Iraqi J. of Science Vol. 41C No.2 pp.25-40 (2000)
- 52- A. A. Al-Ani and S. K. Al-Ani, *An adaptive Enhancement technique for Images Corrupted by Uncorrelated noise*, Iraqi J. of Science Vol. 41C No.2 pp.41-53 (2000)
- 53- A. A. Al-Ani and S. M. Ali, *Atmospheric turbulence and defocusing effects on the resolving power of optical telescopes*. J. College Education For Women, Vol.10 No.2 pp.259-269 (1999)
- 54- A. A. Al-Ani, L. A. Al-Ani and S. M. Ali, *Entropy as a measure of degradation effects*. J. of Saadam University, Vol.2 No.1 pp.113-136 (1998)
- 55- 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 Saadam University, Vol.2 No.1 pp.83-111 (1998)
- 56- A. A. Al-Ani, *Deblurring of astronomical images using modified Wiener filter*, J. of Saadam University, Vol.2 No.1 pp.63-71 (1998)
- 57- S. M. Ali and A. A. Al-Ani, *Matching technique based on Isolating Image objects*. 2nd conference for College of Science, (8-9) July 1997, Philadelphia University, Jordan
- 58- A. A. Al-Ani, *Restoration of degraded object using Modified Wiener filter*. 2nd conference for College of Science, (8-9) July 1997, Philadelphia University, Jordan
- 59- S. K. Al-Ani and A. A. Al-Ani, *Determination of optical energy gap of non-crystalline materials*. Iraqi J. of Science Vol.35 No.4 pp. (1994).
- 60- A. A. Al-Ani, *Imaging through randomly inhomogeneous media*. Iraqi J. of Science Vol.35 No.1 pp. (1994)
- 61- S. J. Lafta and A. A. Al-Ani, *Entropy as a measure of focusing in optical image*. Iraqi J. of Science. Vol.35 No.2 pp. (1994).
- 62- A. A. Al-Ani, S. M. Ali and A. M. A. H. Al-Samaray, *Atmospheric turbulence model program*. Iraqi J. of Science Vol.33 No.3-4 pp. (1992).
- 63- A. A. Al-Ani and S. M. Ali, *Limitations imposed by atmospheric turbulence on astronomical images*. Iraqi J. of Math. And Phys. Vol.13 No.2 pp. (1992).
- 64- F.A. Basil, M. A. Manhel and A. A. Al-Ani, *A study design of thermoelectric cooling device using low cost thermocouples*, J. of Space and Astron. research. 3 pp. (1986).

SUMMARY OF TEACHING COURSES

	Postgraduate Studies	Undergraduate Studies
1	Mathematical Physics	Mathematical Physics
2	Statistical Physics	Mathematics
3	Digital Image Processing	Thermodynamics
4	Fourier Optics	Optics
5	Statistical Optics	Physics of the Waves
6	Astrophysics	Numerical Analysis.
7	Space-Time Geometry	Computer Programming
8	Numerical Analysis.	
9	Mathematical Modeling	
10	Application of Fourier Transform	

PROFESSIONAL REFERENCES

Prof. Dr. Layla Saleh Al-Ali

Now Retired.

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

Email: laylaalali44@hotmail.com

Telephone: +971-505392774

Prof. Dr. Ahmad Kamal Ahmad

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

Email: ahmad.khedher@gmail.com

Telephone: +964-7506075294

Prof. Dr. Laith A. Al-Ani

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

Email: laithalani2003@gmail.com

Telephone: +964-7901610408

Assist. Prof. Dr. Mohammad A. Habeeb

Department of Physics, College of Science, Al-Nahrain University, Baghdad-Iraq

Email: maz_habeeb@yahoo.com

Telephone: +964-7722588577