

## Curriculum Vita

**Name:** Prof.Dr. Ahmed AK. Tahir

**Date and Place of Birth:** 1st-Sep.-1958, Iraq

**Nationality:** Iraqi

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### Qualifications:

- 1) B.Sc (with first class honors) in Physics, College of Science/ University of Mosul, Iraq in 1981.
- 2) Ph.D in Digital Image Processing from Imperial College of Science, Technology and Medicine, University of London, 1991.
- 3) Diploma Imperial College (DIC), 1991

**Current Position:** Professor (since 2012) at the University of Duhok/ College of Science / Physics Department.

### Affiliations:

- 1) Professor at the Department of Computer Science / College of Science / University of Duhok, Jun-2021+
- 2) Professor at Physics department / College of Science / University of Duhok, Oct-2018 to Jun-2021
- 3) Head of the computer science department since Dec-2011 to Oct-2018
- 4) Assistant Professor at Physics Dept/ College of Science/ University of Duhok, 2004-2011.

- 5) Assistant Professor and Director of the High Institute of Remote Sensing, 2003-2004.
- 6) Head of the digital Image Processing Department at the High Institute of Remote Sensing, 2002-2003.
- 7) Assistant Professor at University of Mosul/ Computer Science Department, 2001-2002.
- 8) Assistant Professor and Head of the digital Image Processing Department at Remote Sensing Centre, 1995-2001.
- 9) Lecturer at the University of Mosul/College of Education/Physics Department for the period 1994-1995.
- 10) Lecturer at the University of Mosul/College of Agriculture/ Department of Basic Science for the period 1992-1994.
- 11) Joined PHD study at Imperial College of Science Technology and Medicine/University of London, 1986-1991.
- 12) Worked in Iraqi Scientific Council from 1982-1986 as a group member involved in the National Iraqi Observatory.

### **Training Courses and Workshops Taken:**

- 1) Three Day International Workshop on Time Series Analysis in R-programming organized by Dept. of Research & Publications, A2Z EduLearningHub LLP on 25th, 26th & 27th July 2022.
- 2) One year training Course on computer Hardware and Software in Digital Equipment Corporation Institute (DEC) in West Germany 1983-1984.
- 3) One month training Course on the Control Panel of the Optical Telescope in 1984 at Seize Company in West Germany, NOV.-1984.

### **Teaching Experience/ Undergraduate:**

- 1) Teaching Digital Image Processing BSC students of Computer Science.
- 2) Teaching Computer Graphics to the 3rd year students at computer science department.
- 3) Teaching Numerical Analysis to the 3<sup>rd</sup> year students of Computer Science and Physics.
- 4) Teaching programming languages (Fortran77, Fortran90, Basic, C++) to the first- and second-year students.
- 5) Teaching Wave Motion to the second and third year students at Physics department.
- 6) Teaching Analytical Mechanics to the third and third year students at Physics department.
- 7) Teaching Physics of Remote Sensing to the 3<sup>rd</sup> and 4<sup>th</sup> year students as an optional course to the third and fourth year students at Physics Department.
- 8) Teaching Calculus to the first-year student at Physics department.
- 9) Teaching Advance Calculus to the second-year student at Physics department.
- 10) Teaching Differential Equations to the second-year student at Physics department.
- 11) Teaching Numerical Analysis to the 2<sup>nd</sup>-year students of Computer Science and Physics.

**Teaching Experience/ Postgraduate:**

- 1) Teaching Digital Image Processing and Pattern Recognition Courses to MSC and PHD students, Computer Science Department and Institute of Remote Sensing Institute / University of Mosul.
- 2) Teaching Biometric measurement recognition to MSC students, computer science department.

- 3) Teaching Artificial Neural Network to PHD students of Computer Science and Physics Departments.
- 4) Teaching Special Topics in Digital Image Processing to MSC students of Computer Science.
- 5) Teaching Remote Sensing course to MSC and PHD students at Remote Sensing Institute / University of Mosul.
- 6) Teaching Remote Sensing course to MSC and PHD students of Physics Department/ University of Duhok.

## **Supervision Activities:**

### **1. Supervision MSC Thesis**

<b>No</b>	<b>Thesis Title</b>	<b>Year</b>	<b>University/College</b>	<b>Student Name</b>
1	Improving The Performance Of Finger-Vein Recognition Using Modified Methods Of Preprocessing And Feature Extraction	2019	University of Duhok/ College of Science/ Computer Science	Ahmed A. Mustafa
2	Image Classification Using Convolutional Neural Networks (CNNs)	2019	University of Duhok/ College of Science/ Computer Science	Arman I. Mohammed
3	An Iris recognition Approach for Person Identification and Verification.	2016	University of Duhok/ College of Science/ Computer Science	Akar Abdulsalam Salih
4	A Low Cost Eye Tracking System For Computer Operation by Disabled People.	2016	University of Duhok/ College of Science/ Computer Science	Sarkar Abdulsalam Salih
5	Improving Spatial Resolution of Satellite Images Through Image Fusion Techniques.	2008	University of Duhok/ College of Education/ Computer Science Dept.	Shamal M.Ameen Taha
6	Investigation and Development of Iris Localization Techniques.	2008	University of Duhok/ College of Education/ Computer Science Dept.	Ahmed Ismail Bindian
7	Automatic Road Extraction From IKONAS Image.	2008	University of Duhok/ College of Education/ Computer Science Dept.	Jiyan A. Younis Al-Butany
8	Identification and Classification of Clouds through Satellite Images Using Interpretation and Integrated Classification Methods.	2006	University of Duhok/ College of Education/ Physics Dept.	Zobaida Shaheen Saif-Aldin

9	Auto Recognition Of Lineaments & Drainage System Using Satellite Images.	2005	University of Mosul/ College of Mathematics and Computer Science/ Computer Science Dept.	Alhan Anwer Younes
10	Modeling of The Winter Rainful Mountain Destrict Of Iraq Using Remote Sensing Data.	2005	University of Tekrit/ College of Education/ Department of Geography	Ahmed Adbulghafur Khattab
11	An Automatic Software System For Earth Cover Type Identification From Satellite Images.	2004	University of Mosul/ College of Mathematics and Computer Science/ Computer Science Dept.	Ma'n Abdulkhalik Al-Bag'oa
12	Land Cover Change Detection of Balad Using Image Processing Methods	2004	University of Tekrit/ College of Education/ Department of Geography	Ruqaya Ahmed Al-Ani
13	Radar Image Correction For Speckle Noise.	2004	University of Mosul/ College of Mathematics and Computer Science/ Computer Science Dept.	Hadher Ibrahim Al-Jebury
14	Integration Between Classical & Neural Network Approaches For Unsupervised Classification of Remote Sensing Data.	2004	University of Mosul/ College of Mathematics and Computer Science/ Computer Science Dept.	Lubna T. Hmedi Al-Kuhla
15	Using Image of Satellites as Data Base in Spatial Analysis of Geographical Information System.	2004	University of Mosul/ College of Mathematics and Computer Science/ Computer Science Dept.	Yaseen Dawood Al-Zubaidy
16	Construction of a Proposed System Of Multiple Classification For Remote Sensing Data.	2002	University of Mosul/ High Institute for Remote Sensing.	Kanar M. Sami Al-Nuaimy
17	Image Recognition Using Pattern Entropy And Invariant Moments	2002	University of Mosul/ High Institute for Remote Sensing.	Fadwa Subhi Mustafa Al-Azzo
18	An Interactive Software For Image Registration Using New Algorithms.	2002	University of Mosul/ High Institute for Remote Sensing.	Abeer Adil Al-Allaf
19	Multispectral Image Fusion Using Wavelet Transform.	2001	University of Mosul/ High Institute for Remote Sensing.	Abdul-Rahman Ramzi Qub'a
20	An Integrated Software For Remote Sensing Data Classification.	2001	University of Mosul/ High Institute for Remote Sensing	Turkan Ahmed Khaleel
21	An Interactive Software For Satellite Image Filtering Using Fourier Domain.	1998	Dept.University of Mosul/ College of Science/ Computer Science Dept.	Dhya Hazim Al-Barhawee
22	A PC Based Multispectral Image Processing Software For Remote Sensing Applications.	1998	Dept.University of Mosul/ College of Science/ Computer Science Dept.	Hayder Khaleel Eesa

## 2. Supervision Ph.D Thesis

No.	Thesis Title	Year	University/College	Student Name
1-	Vectorization of Remote Sensing Data for GIS Use	2006	University of Mosul/ College of Mathematics And Computer Science/ Computer Science Dept.	Dhya Hazim Al-Barhawe

### Publications:

- 1) **Tahir, A. AK., and Anghelus, S.,** (2022), “Improving Iris Recognition Accuracy Using Gabor Kernels with Near-Horizontal Orientations”, International Journal of Advances in Signal and Image Sciences, Vol. 8, Issue 1, pp. 25-39.
- 2) **Tahir, A. AK., Dawod, S. S., and Anghelus, S.,** (2021), “An iris recognition system based on a new method of iris localization”, International Journal of Open Information Technologies, Vol. 9, No. 7, 2021, pp. 67-76.
- 3) **A. A. Mustafa, A. A., and Tahir A. AK.,** “A New Finger-Vein Recognition System Using the Complete Local Binary Pattern and The Phase Only Correlation”, International Journal on Signal and Image Sciences, Vol. 7, No. 1, 2021, pp. 38-56.
- 4) **Tahir, A. AK., and Anghelus, S.,** (2020), “An accurate and fast method for eyelid detection” International Journal of Biometrics (IJBM), Vol. 12, No. 2, Pp. (163-178).
- 5) **Mohammed A. I., and Tahir A. AK.,** 2020, “A New Optimizer for Image Classification Wide ResNet (WRN)”, Academic Journal of Nawroz University (AJNU), Vol. 9, No. 4, Pp. (1-13). <https://doi.org/10.25007/ajnu.v9n4a858>
- 6) **Mustafa A. A., and Tahir A. AK.,** 2020, “Improving the Performance of Finger-Vein Recognition System Using A New Scheme of Modified Preprocessing Methods”, Academic Journal of Nawroz University (AJNU), Vol. 9, No. 3, Pp. (397-409).<https://doi.org/10.25007/ajnu.v9n3a855>
- 7) **Mohammed A. I., and Tahir A. AK.,** 2020, “A New Image Classification System Using Deep Convolutional Network and Modified AMSgrad Optimizer”, J. Duhok Univ., Vol. 22, No. 2, Pp. (89-101).
- 8) **Tahir, A. AK., and Anghelus, S.,** “Human Biometrics and Biometric Recognition Systems; An Overview (BIOMETRICA UMANĂ ȘI SISTEMELE DE RECUNOȘTERI BIOMETRICE; O IMAGINE DE ANSAMBLU)”, A XIX-a International Conference on Multidisciplinary, "Professor Dorin Paul - Romanian hydropower founder", Cluj-Napoca, Romania, September (20-21), 2019, Revista "ȘTIINȚĂ ȘI INGINERIE", Vol. 35/2019, Pp (431-446), <http://stiintasinginerie.ro/wp-content/uploads/2020/05/52.-HUMAN-BIOMETRICS-AND-BIOMETRIC-RECOGNITION-SYSTEMS-AN-OVERVIEW-Ahmed-AK.-TAHIR-Stelu%C8%9Ba-ANGHELU%C8%98.pdf>

- 9) **Tahir A. AK. And Anghelus Steluta**, “A New Method of Eyelid Detection for Iris Recognition (O NOUĂ METODĂ DE DETECTARE A PLEOAPELOR PENTRU SISTEMUL DE RECUNOAȘTERE A IRISULUI)”, The XVIII International Conference on Multidisciplinary, "Professor Dorin Paul - Romanian hydropower founder", Cluj, Romania, June (1-2), 2018, Revista "ȘTIINȚĂ ȘI INGINERIE", Vol. 33/2018, Pp (171 - 184).
- 10) **Tahir A. AK. And Al-Dohuki Shamal**, “Image Fusion For Resolution Improvement Of Multispectral Satellite Images (FUZIUNEA IMAGINII PENTRU ÎMBUNĂȚĂȚIREA IMAGINILOR MULTISPECTRALE PRIN SATELIT)”, The XVII International Conference on Multidisciplinary, "Professor Dorin Paul - Romanian hydropower founder", Sebes, Romania, June (2-3), 2017, Revista "ȘTIINȚĂ ȘI INGINERIE", Vol. 31/2017, Pp (397 - 412).
- 11) **Tahir A. AK. And Bindian A. I.**, “Iris Localization for biometric based person Identification”, the XVI International Conference on Multidisciplinary, "Professor Dorin Paul - Romanian hydropower founder", Sebes, Romania, June (10-11), 2016, Revista "ȘTIINȚĂ ȘI INGINERIE", Vol. 30/2016, Pp (215 - 224).
- 12) **Tahir A. AK.**, “Integrating artificial neural network and classical methods for unsupervised classification of optical remote sensing data”, *EURASIP Journal on Advances in Signal Processing* 2012,2012:165 doi:10.1186/1687-6180-2012-165.
- 13) **Tahir A. AK.**, “A Multiple Classifier System for Supervised Classification of Remotely Sensed Data”, J. Duhok Univ., Vol.14, No.1 (Pure and Eng. Sciences), Pp 260-273, 2011.
- 14) **Tahir A. AK.**, “A System Based on Ratio Images and Quick Probabilistic Neural Network for Continuous Cloud Classification”, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 49, No. 12, Pp 5008-5015, DECEMBER 2011.
- 15) **Tahir A. AK**, “Improving Spatial features of Multispectral Satellite Images using Wavelet Transform”, The First scientific Conference of the Scientific research council, High Education Ministry, Baghdad, 14<sup>th</sup>- MAY-2002.
- 16) **Tahir A. AK.**, “Interactive Specification of Multispectral Dataset Transformation Through 3D Display of Feature Space”, The First Iraqi Conference of Remote Sensing, Remote Sensing Society of Iraq, Baghdad, OCTOBER-1997.
- 17) **Tahir A. AK.** and Al-Barhawi D. H., “An Interactive Software for Satellite Image Filtering Using Fourier Domain”, *Al Rafidain Science Journal*, Vol.13, No.1, Published by the University of Mosul, 2001.
- 18) **Tahir A. AK.** and Esa H. K., “A PC-Based Image Processing Software”, *Education and Science Journal*, No.49, Published by the University of Mosul, 2001.

- 19) **Tahir A. AK.**, “Generation and Display of False Colour Composite Using Personal- Computer”, Al Rafidain Science Journal, Vol.12, No.2, Published by the University of Mosul, 2000.

### **Implemented Projects:**

<b>Project Title</b>	<b>Sponsor</b>	<b>Year</b>
Design of Navigation System Software using GPS Facilities	Al-Kendy Company, Ministry of military manufacturing, Mosul, Iraq	2001
Design of Image Processing System For Remote Sensing Application.	University of Tekrit, Remote Sensing Unit..	2002

### **Professional Activities:**

#### **Membership and Academic Activities**

- 1) Member in several journals and societies
  - IEEE
  - EURASIP Journal on Image and Video processing
  - Iraqi Society for Remote Sensing
  - Kurdistan Physicists Syndicate
  
- 2) Reviewer of the following journals:
  - Journal of IEEE Transaction of Geoscience and Remote Sensing.
  - Journal of Intelligent System (JISys).
  - International Journal of Remote Sensing in UK.
  - IET-Image Processing
  - Al-Rafidain Journal in University of Mosul.
  - Iraqi National Geology Journal.
  - Duhok University Journal.
  - Proceedings of Zakho conference on science.
  
- 3) Leadership of academic committees (Scientific Committee and Postgraduate Committee) at the department of Computer Science, 2011-2018.
- 4) Committee Board Member for the College of Science/University of Duhok, 2011-2018.
- 5) Member of the Scientific Committee and Postgraduate Committee at Physics department, 2018-2021.



6) Member of the Scientific Committee and Postgraduate Committee at the department of Computer Science, 2021-2022.