

Hikmat Darwish

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Personnel Information:

Born in Al-Kanssa- Homes, Syria 1952
Gender: Male
Married

Qualifications:

- Ph.D. in “ Telecommunication and Information Technology“
University of Birmingham, Birmingham - England, UK 1986.
- M.Sc. in Communication Engineering - Bradford University
Bradford - England UK 1982.
- B.Sc. in Electronic Engineering - Damascus University
Damascus-Syria 1978.

Academic Ranking, Past and present Jobs:

- Senior Engineer at High Institute for Applied Science and Technology (HIASST)
Damascus, Syria, 1978 – 1981.
- Research assistant and lecturer at HIASST, 1986 -1991.
- Senior researcher, assistant professor and head communication group for R&D,
HIASST Institute, 1991-1995.
- Full Professor, Director of research and head of communication laboratory (4 PhD.
holders, and 15engineers) for R&D, HIASST Institute, 1995-2013.
- Full Prof. and head of Information Technology IT department, Al-Wadi,2016-
2017. International University WIU, Wadi Al-Nassarrah, Homs,Syria,2016-2017.
- Full Prof. and head of scientific committee for R&D, Al-Watanyia Private
University WPU-Hamah,2018-2025

Teaching Experience

University of Birmingham, UK, 1982-1986

- Electronic Circuits.
- Introduction to Logic Design.

HIASST Institute, Damascus, 1987 -2013

Undergraduate:

- Digital Signal Processing.
- Analogue Communication
- Advanced Digital Communication
- Mobile and Satellite Communication Systems
- Radar systems.

- Supervising Final year projects and Research and Development R&D.

Kalamoun University, Syria, 2005 - 2009

- Analogue Communication Systems.
- Signal Processing.
- Fibre Optic Communication Systems.
- Final year projects.

Al-Wadi International University, Syria, 2005 - 2009

- Applied Mathematics for Business Administration
- Discrete Mathematics
- Electronic circuits.
- Microprocessor.

Lebanese International University (LIU), Lebanon, 2014-2016

- Analogue Communication Systems.
- Introduction to Logic Design.
- Digital Signal Processing
- Advanced Communication Systems
- Final year Projects
- Master year thesis.

Al-Watania Private University –Hamah 2018-2025

- Introduction to Computer Networking
- Modelling and Simulation
- EM wave propagation and Antennas
- Radio Communication Systems
- Random Signal Processing
- Introduction to Artificial Intelligence AI.
- Final year projects.

Samples of successful Final year projects and Master Thesis:

Final Year Projects:

- Vehicle path tracking system based on Raspberry and GPS.
- AI for heart diseases diagnoses.
- Face Recognition based on PCA, LDA (Eigen vectors and subspace)
- Dynamic Time Wrapping for isolated speech recognition
- Acoustic Direction Finding (digital beam former and MUSIC algorithm)
- Acoustic Adaptive Array for Source Localization.
- R.F. Adaptive Array for Source Localization.
- L-band Frequency Synthesizer.
- Software driven super-heterodyne receiver (leading to cognitive radio).
- Experimental Digital Microwave communication link (2.5GHz).
- Antenna radiation pattern plotting platform (2.4GHz).
- CW Doppler Radar for vehicle speed monitoring.
- X-Y Robot
- SCADA system for greenhouse control and monitoring

Post-graduate, MSc. thesis:

- Vehicle signature signal processing in FMCW radar for vehicle recognition. HIAST
- Master thesis" OFDM over Fibre Optic", High Institute for Applied Science and Technology, Damascus. HIAST
- Master thesis" non-Linearity effect of Fibre Optic channel on OFDM transmission", AUL University, Lebanon.
- Master thesis" Microcontroller Based Adaptive Traffic Control System", AUL University, Lebanon.
- Master thesis" Connected Car V2V and V2I", AUL University, Lebanon.

Many of the above projects have been awarded as outstanding distinguished final year projects and MSc. thesis.

Sabbatical leaves

1997 - Sabbatical leave to University of Birmingham: accomplished research in Neural Network, Self-Autonomous Vehicle. Offered a post-doctoral position

1999 - Sabbatical leave to École Supérieure d'Électricité (supelec), Metz, France, Erasmos Scholarship, EU: Accomplished joint research concerning the performance of FMCW radar for highway traffic monitoring.

Consultancy and R&D projects:

- 2001- Heading technical committee and accomplishing evaluation of five tenders to import and deploy three ATC civil radars (estimated cost: 60 million USD) at various Syrian civil airports.
- 2003- Heading engineering team and successfully accomplished the project of improving the radio communication networks for Syrian National Earthquake monitoring system.
- 2007- Head of Technical committee for importing Road Monitoring Radar systems.
- 2009- Upgrading and maintaining VHF/UHF radio communication system for behalf of Fire Brigade Authorities –Damascus.
- 2010- Accomplishing the project of RF/Laser Wi-Max network for Damascus Directorate.

Attended National and International

- 1986-One day symposium "radar detection", Savoy place, London, UK, 1986
- 1986-European Microwave Conference", South Hampton, UK,1986
- 2004-EMC UK 2004 Conference", Warwick, UK,2004.
- 2005-International Radar Symposium India 2005 (IRSI-05), Bangalore, India,2005
- 2006 - 2nd International Conference on Information & Communication Technologies, Damascus, Syria.
- 2022-5th International Conference on Signal Processing and Information Communication", ICSPIC, on line, Paris, France. 2022

Publications:

- [1] H.Darwish,"Performance of LDA versus PCA for face recognition in non-ideal lighting", Springer proceeding of the 5th International Conference on Signal Processing and Information Communication on ICSPIC-2022, Paris-France 2022, DOI: [//doi.org/10.1007/978-3-031-13181-3_2](https://doi.org/10.1007/978-3-031-13181-3_2)
- [2] H. Darwish, "Fixed and Mobile Interference Cancellation for the Syrian National Earthquake Monitoring Networks" IEEE International Conference on Information & Communication Technology iccta2006-Damascus –Syria 2006.
- [3] H. Darwish "FMCW radar for measuring distance and speed for car collision warning "published at the Syrian –Lebanese Engineering conference 1 May-1999. Damascus –Syria.
- [4] H.Darwish, Numerous Internal Scientific Memorandums at High Institute of Applied Science and Technology.1990-2013
- [5] H .Darwish, and DC Cooper,"The Log-lattice Detector for radar target in Sea clutter "published in IEE colloquium, UK. 1986.

Languages

Arabic: Native
English: Fluent

Hobbies: *Reading; Sciences, History, Fin Art, Oil Painting and some sport.*