

# Wael Abd Ellatif, Ph.D.

**Associate Professor**, Electronics and Communication Eng. Dept. **Head of Quality Assurance**, College of Engineering and Technology



#### **SUMMARY**

Wael A. E. Ali is an associate professor at the department of Electronics and Communications Engineering. He has received his Ph.D. in Electronics and Communications from Alexandria University, Egypt; where his research work included Smart antenna for mobile and radar systems, Microstrip antennas designs for Mobile applications and Microwave filters design and implementation.

#### **PERSONAL DETAILS**

Surname : Ali
Given Name : Wael
Date of birth : 20-11-1982
Nationality : Egyptian

Place of birth : Alexandria, Egypt

Marital Status : Married

e-mail Address : wael\_abd\_ellatif@yahoo.com Residential Address : 24 Mensha St, Moharm Bek

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P.O.Box: 1029 - Post code: 21913

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### **EDUCATION**

2008 – 2012 Department of Electronics and Communications, Faculty of Engineering,

Alexandria University.

Ph. D. Electronics and Communications Engineering, May 2012.

2004 – 2007 Department of Electronics and Communications Engineering, Faculty of Engineering,

Arab Academy for Science and Technology.

M. Sc. Electronics and Communications Engineering, January 2007.

1999 – 2004 Department of Electronics and Communications Engineering, Faculty of Engineering,

Arab Academy for Science and Technology.

B. Sc. Electronics and Communications Engineering, September 2004.

#### PROFESSIONAL EXPERIENCE

Dec. 2018 - Till Now College of Engineering and Technology, Arab Academy for Science,

Technology and Maritime Transport. **Head of Quality Assurance Unit**.

Feb. 2017 - Till Now Department of Electronics and Communications Engineering, College of

**Engineering and Technology** 

Arab Academy for Science, Technology and Maritime Transport.

Associate Professor.

May. 2012 - Feb. 2017 Department of Electronics and Communications Engineering, College of

Engineering and Technology

Arab Academy for Science, Technology and Maritime Transport.

**Assistant Professor.** 

Jan. 2007 - Mar. 2012 Department of Electronics and Communications Engineering, College of

Engineering and Technology

Arab Academy for Science, Technology and Maritime Transport.

**Assistant Lecturer.** 

Sep. 2004 – Jan. 2007 Department of Electronics and Communications Engineering, College of

**Engineering and Technology** 

Arab Academy for Science, Technology and Maritime Transport.

**Teaching Assistant.** 

#### UNIVERSITY ADMINISTRATIVE ROLE

 Participate in the development of Undergraduate Courses in Electronics and Communications Engineering Department

 Participate in the development of Laboratories in Electronics and Communications Engineering Department

 Department Representative in the renewal process of the Status Report for B.Sc. Program from Supreme Council of Universities

Co-Supervisor of the Examination committee

 Department Representative in the Committee of National Authority of Quality Assurance and Accreditation of Education (NAQAAE).

Head of Quality Assurance Unit, College of Engineering and Technology.

### **AREAS OF INTEREST**

- Smart Antennas.
- Multi band& UWB Antennas for different wireless communication applications.
- Metamaterial antennas for Multi band wireless communication applications.
- Microstrip filters (low pass, high pass, band stop and band pass).
- MIMO Antennas.

## **ACADEMIC / TEACHING EXPERIENCE**

## 1- Undergraduate Teaching Courses:

- Electronics 2 (EC339).
- Electromagnetics Wave Propagation (EC442).
- Microwave Technology (EC546).
- Advanced Antennas Systems (EC545).

### 2- Undergraduate Projects Supervision:

- Microstrip Antenna and its Applications in Wideband and Ultra-Wideband Systems.
- Planar Reconfigurable Band Notched UWB Microstrip Antenna.

- Compact Microstrip Antenna for Wireless Applications.
- An Improved Smart Antenna Technology for LTE Systems.
- Reconfigurable UWB MIMO Antenna for Cognitive Radio Applications.
- Wireless Charging System Based on RF Energy Harvesting.

### 3- M.Sc. Thesis Supervision:

- Performance Analysis of Least Mean Square/Sample Matrix Inversion Algorithm for Smart Antenna Systems. (Completed)
- Adaptive Beamforming Using Planar Array: Performance of LMS and RLS Beamforming Algorithms
  Using Linear and Planar Arrays Composed of Actual Elements. (Completed)
- Performance Enhancement of Microstrip Antennas Using Metamaterials and Metasurfaces for Wireless Applications. (Completed)
- Design and Analysis of Miniaturized Reconfigurable Multifunction Microstrip Array Antenna for Communication and Radar Applications. (Completed)
- 3D Fractal Beamformer for Advanced Wireless Communication Systems. (Completed)
- PAPR Reduction Technique for Improvement of OFDM Systems Performance. (Completed)
- Indoor RFID Tag Positioning and Identification Using Microstrip Patch Antenna Array. (Completed)
- Ultra Wideband Antenna Array System. (Completed)
- Wearable Microstrip Antenna for UWB Applications. (Completed)
- CRLH Metamaterial-based Antenna for Biomedical Application.
- Antenna Array Design for 5G Applications.
- Highly Isolated Reconfigurable Band-Notched UWB MIMO Antenna.

## 4- Ph.D. Thesis Supervision:

 Robust DOA and Beamforming Algorithms Using Smart Antennas for LTE systems in Multipath Environment. (Alexandria University).

## 5- Engineering Software Capabilities:

- MATLAB: For signal processing and communication systems.
- MATHCAD: For signal processing and communication systems.
- **HFSS**: For simulating electromagnetic structures.
- CST: For simulating electromagnetic structures.
- **NEC & Super NEC**: For simulating electromagnetic structures.

#### LIST OF PUBLISHED PAPERS IN JOURNALS

- Hassan Elkamchouchi, Darwish Mohamed, and Wael Ali. "D3LS STAP Approach on Wideband Signals Using Uniformly Spaced Real Elements," IJCA - International Journal of Computer Applications, Vol. 22 – No. 4, PP. 42-47, May 2011. NY, USA.
- Hassan Elkamchouchi, Darwish Mohamed, and Wael Ali, "A Fast DOA Estimation Based on Space-Time Direct Data Domain Approach Using Real Antenna Elements," IJARCS -International Journal of Advanced Research in Computer Science, Vol. 2 – No. 4, PP. 531-536, August 2011. India.
- Hassan Elkamchouchi, Darwish Mohamed, and Wael Ali, "The Effect of Missing Elements on the Performance of D3LS STAP Approach Using Real Antenna Elements," IJCA - International Journal of Computer Applications, Vol. 28 – No. 11, PP. 9-14, August 2011. NY, USA.
- Mohamed M. M. Omar, Wael A. E. Ali and Sara A. Elesawy," Applying the LMS and RLS Beamforming Algorithms on Actual Linear and Planar Antenna Array," IJAER – International Journal of Applied Engineering Research, Vol. 9 – No. 17, PP. 3711-3722,2014
- H. M. Elkamchouchi, D. A. E. Mohamed, O. G. Mohamed and **W. A. E. Ali**, "Multiuser detection using blind robust beamforming in multipath environment for LTE system," International Journal on Communications Antenna and Propagation (IRECAP), Vol. No., PP., 2017, Italy.
- A. Boutejdar, W. A. Ellatif, A. A. Ibrahim, and M. Challal "A simple transformation from lowpass to bandpass filter using a new quasi-arrow head defected ground structure resonator and gap-Jinverter," Microw. Opt. Technol. Lett., 58: 947–953, 2016.

- A. Boutejdar, and **W. Abd Ellatif**, "A novel compact UWB monopole antenna with enhanced bandwidth using triangular defected microstrip structure and stepped cut technique," Microw. Opt. Technol. Lett., 58: 1514–1519, 2016.
- W. A. Ali, A. I.Zaki, and M. H.Abdou, "Design and fabrication of rectangular ring monopole array with parasitic elements for UWB applications," Microw. Opt. Technol. Lett., 58: 2268–2273, 2016.
- **W. A. Ali**, A. M.Mansour, and D. A. Mohamed, "Compact UWB wearable planar antenna mounted on different phantoms and human body," Microw. Opt. Technol. Lett., 58: 2531–2536, 2016.
- Wael ALI, Ehab HAMAD, Mohamed BASSIUNY and Mohamed HAMDALLAH, "Complementary Split Ring Resonator Based Triple Band Microstrip Antenna for WLAN/WiMAX Applications," Radioengineering, Vol. 26–No. 1, 2017, Slovakia.
- A. Boutejdar, A. A. Ibrahim and **W. A. E. Ali**, "Design of compact size and tunable band pass filter for WLAN applications," in Electronics Letters, vol. 52, no. 24, pp. 1996-1997, 11 24 2016.
- A. Boutejdar and W. A. E. Ali, "Improvement of compactness of low pass filter using new quasiyagi-DGS-resonator and multilayer-technique," Progress In Electromagnetics Research C, Vol. 69, 115-124, 2016.
- **Wael ALI**, Ahmed A. IBRAHIM and Jan MACHAC, "Compact Size UWB Monopole Antenna with Triple Band-Notches," Radioengineering, Vol. 26 No. 1, PP., 2017, Slovakia.
- Ahmed A. IBRAHIM, **Wael ALI**, and Jan MACHAC, "UWB Monopole Antenna with Band Notched Characteristics Mitigating Interference with WiMAX," Radioengineering, Vol. 26 No. 2, 2017, Slovakia.
- A.A. Ibrahim, H.A. Mohamed and **W.A.E. Ali**, Tunable dual/triple band-pass filter based on stub-loaded resonators for wireless applications, 2017 JINST 12 P04003.
- Ali, W. A. E., & Ibrahim, A. A. (2017). A compact double-sided MIMO antenna with an improved isolation for UWB applications. AEU International Journal of Electronics and Communications, 82, 7-13.
- W.A.E. Ali and M.Z.M. Hamdalla, Compact triple band-stop filter using novel epsilon-shaped metamaterial with lumped capacitor, 2018 JINST 13 P04007.
- A.A. Ibrahim, M.A. Abdalla and **W.A.E. Ali**, Dual band pass filter with sharp transmission zeros for wireless applications, 2018 JINST 13 P06020.
- W. A. E. Ali, A. A. Ibrahim, "Tunable Band-Notched UWB Antenna from WLAN to WiMAX with Open Loop Resonators using Lumped Capacitors," App. Comp. Electromag. Soc., vol. 33, no. 6, 603-609, June 2018.
- Salamin, MA., Ali, W., Zugari, A. Microsyst Technol (2018). <a href="https://doi.org/10.1007/s00542-018-4183-9">https://doi.org/10.1007/s00542-018-4183-9</a>.
- Ali, W.A.E., Mohamed, H.A., Ibrahim, A.A. et al. Microsyst Technol (2019). https://doi.org/10.1007/s00542-018-04285-z.
- M.A. Salamin, W.A.E. Ali and A. Zugari, A novel UWB antenna using capacitively-loaded fork-shaped resonator and modified fork-shaped DMS for interference mitigation with WiMAX and WLAN applications, 2019 JINST 14 P03008.
- A.A. Ibrahim, M.A. Abdalla and **W.A.E. Ali**, "Small Size and Wide-Band Band Pass Filter with DGS/CRLH Structures," App. Comp. Electromag. Soc., vol. 34, no. 5, 777-783, May 2019.
- Mohammad Ahmad Salamin , Wael A.E. Ali , Sudipta Das, Asmaa Zugari, "Design and investigation of a multi-functional antenna with variable wideband/notched UWB behavior for WLAN/X-band/UWB and Ku-band applications, Int. J. Electron. Commun. (AEÜ) 111 (2019) 152895.
- Salamin, M.A., Ali, W.A.E., Das, S. et al. A novel etched-substrate mechanism for characteristics improvement of X-band broadband printed monopole antenna. Microsyst Technol (2020). https://doi.org/10.1007/s00542-020-04862-1

#### LIST OF PUBLISHED PAPERS IN CONFERENCES

- Wael A. E. Ali, Darwish A. E. Mohamed, "Enhancement of Inverted-F Antennas Performance for Mobile Communications," Saudi Technical Conference & Exhibition. (STCEX2006) Riyadh, Saudi Arabia, Dec. 2006.
- Wael A. E. Ali, Darwish A. E. Mohamed, "New Configurations of Inverted F Antennas for optimizing their Performance for Mobile Communications," International Conference for Computer Theory and Applications. (ICCTA), Alexandria, Egypt, Oct. 2006.

- A. Boutejdar, A. Elsherbini, A. Wael, M. Salah, A. Loay and A. Omar, "Design of Compact Microstrip Low Pass Filters Using Coupled Half Circle Defected Ground Structures (DGSs)," IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting San Diego, California, USA, Jul 2008.
- Hassan M. Elkamchouchi, Darwish A. A. Mohamed, and Wael A. E. Ali, "Multiple Constraint Space Time Adaptive Processing (STAP) Using Real Elements Based on Direct Data Domain Least Squares (D<sup>3</sup>LS) Approach," 27<sup>th</sup> NRSC 2010-National Radio Science Conference, March 14-18, 2010, Menoufya University, Egypt.
- Hassan M. Elkamchouchi, Darwish A. A. Mohamed, and Wael A. E. Ali, and Mohammad M. M. Omar. "Space Time Adaptive Processing (STAP) Using Uniformly Spaced Real Elements Based on Direct Data Domain Least Squares (D3LS) Approach, "IEEE- ICMMT -International Conference on Microwave and Millimeter Wave Technology, May 8-11, 2010, Ghengdu, China.
- Hassan M. Elkamchouchi, Darwish A. A. Mohamed, and Wael A. E. Ali, "Direct Data Domain Least Squares (D3LS) STAP Approach on Signals from Nonuniformly, Semicircular and Sinusoidal Spaced Arrays of Real Elements," IEEE - ICMMT - International Conference on Microwave and Millimeter Wave Technology, May 8-11, 2010, Ghengdu, China.
- Hassan M. Elkamchouchi, Darwish A. A. Mohamed, and Wael A. E. Ali, "Space Time Adaptive Processing (STAP) Using Two Dimensional Array of Real Elements Based on Direct Data Domain Least Squares (D3LS) Approach," IEEE- ISSSE - International Symposium on Signals, Systems and Electronics, September 17-20, 2010, Nanjing, China.
- Hassan M. Elkamchouchi, Darwish A. A. Mohamed, and Wael A. E. Ali, "Multiple Constraint Space-Time Direct Data Domain Approach Using Nonuniformly, Semicircular and Sinusoidal Spaced Arrays of Real Elements," IEEE- ISSSE - International Symposium on Signals, Systems and Electronics, September 17-20, 2010, Nanjing, China.
- Ali, W.A.E.; Mohamed, D.A.E.; Hassan, A.H.G., "Performance analysis of least mean square sample matrix inversion algorithm for smart antenna system," in IEEE Antennas and Propagation Conference (LAPC), Loughborough, UK, vol., no., pp.624-629, 11-12 Nov. 2013.
- Ali, W.A.E.; Hassan, A.H.G., "A hybrid least mean square/sample matrix inversion algorithm using microstrip antenna array," in IEEE Science and Information Conference (SAI), 2014, London, UK, Vol., no., pp.871-876, 27-29 Aug. 2014.
- H. M. Elkamchouchi, D. A. E. Mohamed, O. G. Mohamed and W. A. E. Ali, "Robust beamforming for LTE-uplink receiver," 2015 IEEE 4th Asia-Pacific Conference on Antennas and Propagation (APCAP), Kuta, 2015, pp. 340-344.
- H. M. Elkamchouchi, D. A. E. Mohamed, O. G. Mohamed and **W. A. E. Ali**, "Robust doa estimation and data detection for mobile communication in multipath environment," 2016 4th International Conference on Cloud Computing and Intelligence Systems (CCIS), Beijing, China, 2016, pp. 293-297.
- H. M. Elkamchouchi, D. A. E. Mohamed, O. G. Mohamed and W. A. E. Ali, "Robust Blind Beamforming for LTE in Multipath Environment," 2nd International Conference on Control, Electronics, Renewable Energy, and Communications (ICCEREC), 13 -15 September 2016, Bandung, Indonesia.
- A. Boutejdar, M. Challal, A. A. Wael, A. Ibrahim and P. Burte, "Compact LPF to UWB BPF transition employing quasi-triangular DGS resonators and a discontinuity on the microstrip feed line," 2015 4th International Conference on Electrical Engineering (ICEE), Boumerdes, 2015, pp. 1-4.
- A. Boutejdar, A. Ibrahim, M. Challal, A. A. Wael and E. Burte, "Extracting of compact tunable BPF from LPF using single T-DGS-resonator and 0.25PF/0.5PF Chip Monolithic Ceramic Capacitors," 2015 4th International Conference on Electrical Engineering (ICEE), Boumerdes, 2015, pp. 1-5.
- M. A. Bassiuny, E. K. I. Hamad, **W. A. Aly** and M. Z. M. Hamdallah, "Dual-band microstrip antenna for WiMAX applications using complementary split ring resonators," 2016 33rd National Radio Science Conference (NRSC), Aswan, 2016, pp. 57-63.
- W. A. E. Ali, D. A. Mohamed, and R. Mahmoud, "A 4-Elements Performance Analysis of Compact UWB Antenna for MIMO-OFDM Systems," 2016 IEEE International Conference of Wireless for Space and Extreme Environments (WiSEE), 26 -29 September 2016, Aachen, Germany.
- Y. M. Madany, D. A. E. Mohamed, W. A. E. Ali and H. A. Abd-Alnaeem, "Design and Analysis of Miniaturized Reconfigurable Multifunction Microstrip Array Antenna for Communication and Radar Applications," 2016 UKSim-AMSS 18th International Conference on Computer Modelling and Simulation (UKSim), Cambridge, United Kingdom, 6-8 April 2016, pp. 325-330.

- D. A. E. Mohamed, **W. A. E. Ali**, H. A. Abd-Alnaeem and Y. M. Madany, "Design and analysis of miniaturized multifunction two elements microstrip array antenna with SPDT switch for communication and radar applications," 2016 17th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Montreal, QC, 10-13 July 2016, pp. 1-2.
- M. M. Omar, A. Zaki, **W. A. E. Ali** and A. A. M. Fata, "3D Multi-band fractal beamforming based on LMS algorithm," 2016 Progress in Electromagnetic Research Symposium (PIERS), Shanghai, 2016, pp. 4690-4694.
- R. Mahmoud, **W. A. Ellatif**, O. Gaafar and D. A. E. Aziz, "A calibration method for hybrid technique based on CMA with clipping in MIMO-OFDM system," 2018 11th German Microwave Conference (GeMiC), Freiburg, Germany, 2018, pp. 203-206.
- E. K. I. Hamad, **W. A. E. Ali**, M. Z. M. Hamdalla and M. A. Bassiuny, "High gain triple band microstrip antenna based on metamaterial super lens for wireless communication applications," 2018 International Conference on Innovative Trends in Computer Engineering (ITCE), Aswan, 2018, pp. 197-204.
- R. Mahmoud, **W. A. Ellatif**, O. Gaafar and D. A. E. Aziz, "A calibration method for hybrid technique based on CMA with clipping in MIMO-OFDM system," *2018 11th German Microwave Conference (GeMiC)*, Freiburg, 2018, pp. 203-206.
- W. A. E. Ali, A. A. Ibrahim and H. A. Mohamed, "Highly Isolated Two Elements MIMO Antenna with Band-Notched Characteristics for UWB Applications," 2019 6th International Conference on Advanced Control Circuits and Systems (ACCS) & 2019 5th International Conference on New Paradigms in Electronics & information Technology (PEIT), Hurgada, Egypt, 2019, pp. 77-81, doi: 10.1109/ACCS-PEIT48329.2019.9062872.
- R. M. Thabet, **W. A. E. Ali** and O. G. Mohamed, "Synchronization Error Reduction Using Guard-Band Allocation for Wireless Communication Systems," *2020 International Conference on Innovative Trends in Communication and Computer Engineering (ITCE)*, Aswan, Egypt, 2020, pp. 308-312, doi: 10.1109/ITCE48509.2020.9047789.

#### PROFESSIONAL DEVELOPMENT

### 1- Training

• Two Months in Magdeburg University, Germany (2007). The field of training was microwave filters Using Defected Ground Structure (DGS).

#### 2- Attended Conferences

- IEEE 27th NRSC 2010-National Radio Science Conference, March 14-18, 2010, Menoufya University, Egypt.
- International Conference for Computer Theory and Applications. (ICCTA), Alexandria, Egypt, Oct. 2006.
- IEEE International Symposium on Signals, Systems and Electronics ISSSE 2010, September 17-20, 2010, Nanjing, China.
- IEEE Science and Information SAI 2014, August27-29, 2014, London, UK.

### 3- International Journal reviewer

- International Journal of Electronics and Communications (AEÜ).
- IET Electronics Letters.
- International Journal of RF and Microwave Computer-Aided Engineering.
- International Journal of Sensors. Wireless Communications and Control.