Dr. Abdelhady Mohamed
Professor
Electrical Engineering Department
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Benha University
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EDUCATION

Visiting Professor **2024-2025**
Purple Mountain Labs, State key Laboratory of Millimeter-wave, Southeast Univ., China

Professor Promotion **Oct 2023**
Electrical and Computer Engineering, Benha University, Egypt

Associate Professor Promotion **July 2018**
Electrical and Computer Engineering, Benha University, Egypt

Post-Doctoral Fellowship **2013- 2015**
Electrical and Computer Engineering, Concordia University, Montreal, QC, Canada

Doctor of Philosophy **2007-2013**
Electrical and Computer Engineering, Menofiya University, Egypt
Thesis Title**:** Dielectric Resonator Reflectarray

PhD Scholarship **2010-2012**
State Key Laboratory of Millimeter wave, Southeast University, Nanjing, China

Masters of Applied Science **2002-2005**
Electronics and Communications Engineering, Benha University, Egypt
Thesis Title**:** Active Integrated Antennas

Bachelor of Science *(Excellent with honors)* **1995-2000**
Electronics and Communications Engineering, Benha University, Benha, Egypt
Project Title: Microstrip Antennas

WORK EXPERIENCE

Professor **Oct 2023 – Present**
Electrical Engineering Department
Faculty of Engineering, Benha University, Benha, Egypt

Associate Professor **July 2018 – Oct 2023**
Electrical Engineering Department
Faculty of Engineering, Benha University, Benha, Egypt

Assistant Professor **June 2013 – July 2018**
Electrical Engineering Department
Faculty of Engineering, Benha University, Benha, Egypt

Post-Doctoral Fellow **Oct. 2013 – Jul. 2015**
Department of Electrical and Computer Engineering
Concordia University, Montreal, QC, Canada

- Conducted research on new investigation about linearly and circularly polarized reflectarray and folded reflectarray for millimeter wave's application (30 GHz band) based on the low profile technology.

Assistant Professor **July. 2013 – Jul. 2018**
Electrical Engineering Department
Faculty of Engineering, Benha University, Benha, Egypt

Lecturer (part-time) **Sep 2013 - May 2014**

- Military Technical College, Egypt

Research & Teaching Assistant **Sep 2001- Apr 2013**
Electrical Engineering Department
Faculty of Engineering, Benha University, Benha, Egypt

Publications

Journal Papers:

[39] *Guan-Long Huang, Chu-Wen Bin, Hao-Lei Liu, Zi-Yu Pang, Rui-Sen Chen, Qiang Shao, Xian-Hui He, Mustafa K. Taher Al-Nuaimi, Jingtao Zeng, Hua Yang, Wei Lin,* ***Abdelhady Mahmoud****, Chow-Yen-Desmond Sim, Yiannis Vardaxoglou," Multi-Resonant Cavity-Backed Slot Antennas with Enhanced Bandwidth and High Isolation ", Accepted, in printing,IEEE Antennas and Wireless Propagation Letters, 2026.*

[38] *Meshari D. Alanazi,* ***Abdelhady M.A****, Ahmed A. Ibrahim et al. "Circularly Polarized Millimeter-Wave Hemisphere DRA Employing FSS Polarizer and Dielectric Superstrate for 5G Applications", Accepted, in printing, Sci Rep 16, 2026.*

[37] *Zakaria, E.,* ***Abdelhady, A.M.****, Hassan, A.Y. et al. Bandwidth-efficient power-efficient frequency diversity MIMO-OFDM system. Discov Appl Sci 7, 1111 (2025)*

[36] ***Abdelhady, A.M.****, Mohamed, H.A., Ali, W.A. et al. High gain quad-port circularly polarized aperture-coupled MIMO antenna. Sci Rep 15, 32606 (2025). https://doi.org/10.1038/s41598-025-19993-6*

[35] *Guan-Long Huang, Jin-Peng He, Peng-Fei Qin, Zi-Yu Pang, Xian-Hui He,* ***Abdelhady Mahmoud****, Jingtao Zeng, Hua Yang, et al., "Antenna Design Using an Enhanced Multi-Objective Artificial Hummingbird Algorithm Based on Tolerance Mechanism," Microwave and Optical Technology Letters 67 (2025): 1-6*

[34] *Nawar, R.I.,* ***Abdelhady, A.M.*** *& Hassan, A.Y. High Performance Circularly Polarized Quad-Elements for 5G Wireless Communications. Arab J Sci Eng 50, 10837–10854 (2025). https://doi.org/10.1007/s13369-024-09844-3*

[33] *Meshari D. Alanazi, Wael A.E. Ali,* ***M.A. Abdelhady****, Ahmed A. Ibrahim,"Millimeter-wave monopole antenna with circular polarization utilizing FSS polarizer for 5G communications, Engineering Science and Technology, an International Journal,Volume 61,2025,101931. https://doi.org/10.1016/j.jestch.2024.101931.*

[32] *Mohamed S. Sayed, Hatem M. Zakaria,* ***Abdelhady M. Abdelhady****, Abdelhalem Zekry, Interference Mitigation in Mixed-Numerology System Using Hybrid Waveforms, Ain Shams Engineering Journal, Volume 15, Issue 3,2024,102581.*

[31] *G. -L. Huang, Z. -Y. Pang, M. K. T. Al-Nuaimi, A. A. Kishk and* ***A. Mahmoud****, "A Broadband and High-Aperture-Efficiency Multilayer Transmitarray Based on Aperture- Coupled Slot Unit Cells," in IEEE Transactions on Antennas and Propagation, vol. 71, no. 12, pp. 9633-9642.*

[30] *Basma M Yousef, Allam M Ameen, Wael A E Ali, Ahmed A Ibrahim,* ***Abdelhady M A*** *and Ashraf E Ahmed "Compact size and wideband 4 × 4 MIMO antenna for 5G NR networks" Physica Scripta, Volume 99, Number 12. DOI 10.1088/1402-4896/ad8aa2.*

[29] *Rehab Ibrahim Nawar, Ashraf Yahia Hassan,* ***Abdelhady Mahmoud Abdelhady*** *"High gain wideband circularly polarized antenna with modified ground plane"Indonesian Journal of Electrical Engineering and Computer Science, Vol.32,*

No.1, October 2023, pp. 284~291.

[28] *Kiyani, A.; Asadnia, M.; Abbas, S.M.; Esselle, K.P.;* ***Mahmoud, A.*** *Wide Dual-Band Circularly Polarized Dielectric Resonator: Innovative Integration of a Single Hybrid Feed and Thin Grounded Metasurface. Micromachines 2023, 14, 1432.*

[27] *Samar A. Refaat, Hesham A. Mohamed,* ***Abdelhady M. Abdelhady****, Ashraf S. Mohra "A 28/38 GHz tuned reconfigurable antenna for 5G mobile communications" Indonesian Journal of Electrical Engineering and Computer Science, Vol. 31, No. 1, pp: 248-258*

[26] *M. K. T. Al-Nuaimi, S. -L. Zhu, W. G. Whittow, R. -S. Chen, G. -L. Huang and* ***A. Mahmoud****, "Design of Alvarez Beam Scanning Reflectarray With Inversely Proportional Focal Length," in IEEE Antennas and Wireless Propagation Letters, vol. 22, no. 6, pp. 1416-1420, June 2023*

[25] *Xu, Y.; Mu, L.; Xu, Y.;* ***Mahmoud, A.****; Wang, Y.; Ramahi, O.M. Wearable Directional Button Antenna for On-Body Wireless Power Transfer. Electronics 2023, 12, 1758.*

[24] *Khan, H.A.; Rafique, U.; Abbas, S.M.; Ahmed, F.; Huang, Y.; Uqaili, J.A.;* ***Mahmoud****,* ***A.****Polarization-Independent Ultra Wideband RCS Reduction Conformal Coding Metasurface Based on Integrated Polarization Conversion-Diffusion-Absorption Mechanism. Photonics 2023, 10, 281.*

[23] *Yasin, A.; Gogosh, N.; Sohail, S.I.; Abbas, S.M.; Shafique, M.F.;* ***Mahmoud****,* ***A.*** *Relative Permittivity Measurement of Microliter Volume Liquid Samples through Microwave Filters. Sensors 2023, 23, 2884.*

[22] *A. Kiyani, Nasimuddin N., Raheel M H., Affan A., Syed M., Karu P Esselle, and* ***A. Mahmoud****, "A Single-Feed Wideband Circularly Polarized Dielectric Resonator Antenna Using Hybrid Technique With a Thin Metasurface," in* IEEE Access*, vol. 10, pp. 90244-90253, 2022.*

[21] *Ahmed A., Hijab Z., Syed M., Mohamed I. A., Gaurav V., Subhas M. and* ***A. Mahmoud****," Compact Four-Port Circularly Polarized MIMO X-Band DRA" Sensors, MDPI, June 2022.*

[20] *S Shrestha, H Zahra, A Kiyani, M Asadnia, SM Abbas,* ***A. Mahmoud****, " Miniaturized Wideband Antenna Prototype Operating over the Ku-Band", Micromachines, MDPI, 13 (3), 471, 2022*

[19] *G Varshney, RS Yaduvanshi, AA Ibrahim,* ***A. Mahmoud,*** *"Technique of Controlling the Bandwidth of MIMO Rectangular Dielectric Resonator Antenna" MAPAN,2022, 1-9.*

[18] *Attia, H, Kishk, AA, Abdalla, MA, Gaya, S, Hamza, A,* ***Mahmoud, A.*** *, "Ridge gap waveguide antenna array with improved mutual isolation for millimeter wave applications. " Int J RF Microw Comput Aided Eng. 2021; 31(11):e22831.*

[17] ***A. Mahmoud****, Mohamed I. Ahmed, G. Varshney, A. A. Ibrahim, "An array of staircase-shaped circularly polarized DRA," International Journal of RF and Microwave Computer-Aided Engineering, vol.31, issue 6, 2021*

[16] *A. A. Omar,* ***A. Mahmoud****, J. Choi and W. Hong, "Wideband Transmissive Polarization Rotator With In-Band Notches Enabling Multiband Operation," in IEEE Access, vol. 9, pp. 44751-44756, 2021.*

[15] *Mourad S. Ibrahim, Hussein Attia, Qiang Cheng,* ***A. Mahmoud*** *"Wideband circularly*

polarized aperture coupled DRA array with sequential-phase feed at X-band "Alexandria Engineering Journal, Volume 59, Issue 6, 2020, Pages 4901-4908.

[14] *A. A. Omar, W. Hong, A. Al-Awamry and **A. -E. Mahmoud**, "A Single-Layer Vialess Wideband Reflective Polarization Rotator Utilizing Perforated Holes," in IEEE Antennas and Wireless Propagation Letters, vol. 19, no. 12, pp. 2053-2056, Dec. 2020.*

[13] *M. K. T. Al-Nuaimi, **A. Mahmoud**, W. Hong and Y. He, "Design of Single-Layer Circularly Polarized Reflectarray With Efficient Beam Scanning," in* IEEE Antennas and Wireless Propagation Letters*, vol. 19, no. 6, pp. 1002-1006, June 2020.*

[12] *J. Yang, Q. Cheng, M. K. T. Al-Nuaimi, A. Kishk and **A. Mahmoud**, "Broadband Folded Reflectarray Fed by a Dielectric Resonator Antenna," in* IEEE Antennas and Wireless Propagation Letters*, vol. 19, no. 1, pp. 178-182, Jan. 2020.*

[11] *Jin Y., Cheng Z., Huifeng M., Wei Y., Liuxi Y., Juncheng K., Mingzheng C., **Abdelhady M.**, Qiang C., and Tie jun C., "Tailoring polarization states of multiple beams that carry different topological charges of orbital angular momentums," Opt. Express 26, pp. 31664-31674, (2018)*

[10] *B. Mohammadi, **Abdelhady M.** et al., "Enhanced Reflectarray Antenna Using Elements With Reduced Reflection Phase Sensitivity," in IEEE Antennas and Wireless Propagation Letters, vol. 17, no. 7, pp 1334-1338, July 2018.*

[9] *M. A. Moharram; **A. Mahmoud**; A. A. Kishk, "A Simple Coaxial to Circular Waveguide OMT for Low-Power Dual-Polarized Antenna Applications," in IEEE Trans. on Microwave Theory and Techniques, vol.66, Issue 1, 2017, pp.109-115*

[8] ***A. Mahmoud**, A. A. Kishk, Z. Hao and W. Hong, "Ka-band circularly polarized reflectarray: Using a double-layers cross slot," in IEEE Antennas and Propagation Magazine, vol. 58, no. 4, pp. 60-68, Aug. 2016.*

[7] ***A.-H. Mahmoud** and A. A. Kishk, "Ka-band low profile circularly polarized reflectarray," Progress in Electromagnetics Research C, Vol. 63, 43-51, 2016.*

[6] ***Mahmoud, A.-E.**; Wei Hong; Yan Zhang; Kishk, A. "W-Band Mutlilayer Perforated Dielectric Substrate Lens" IEEE Antennas and Wireless Propagation Letters, vol.13, pp.734-737, 2014.*

[5] ***M. Abd-Elhady**, W. Hong, Y. Zhang "A Ka-Band Reflectarray Implemented With a Single-Layer Perforated Dielectric Substrate" IEEE Antennas and Wireless Propagation Letters,vol.11,pp.600-603, 2012.*

[4] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Varying Slot Lengths Strip Loading Squared Dielectric Resonator Reflectarray," International Journal of Electromagnetics and Applications, Vol.2, No.3, pp. 51-55, 2012.*

[3] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, " Dual Sized Varying Slot Lengths Loading Dielectric Resonator Reflectarray," International Journal of Electromagnetics and Applications, Vol.2, No.3, pp.46-50, 2012.*

[2] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Linearly Polarized Fed Circularly Polarized DRA Reflectarray," International Journal of Electromagnetics and Applications, Vol.2, No.2, pp. 11-15, 2012.*

[1] *S. H. Zainud-Deen, S. M. Gaber, **A. M. Abd-Elhady**, K. H. Awadalla, A. A. Kishk " Perforated Dielectric Resonator Antenna Reflectarray " ACES journal, Vol. 26, No. 10, pp. 848-855, 2011.*

Conference Proceedings:

[23] *K. Ashfaq, R. S. Anwar, A. M., A. S. I. Amar, A. K. Mahmoud and M. M. Tahseen, "High-Efficiency Polarization Conversion Metasurface for X-Band Applications,"* 2025 International Telecommunications Conference (ITC-Egypt)*, Cairo, Egypt, 2025, pp. 906-908.*

[22] *Arslan Kiyani, Syed Muzahir Abbas, Ladislau Matekovits,* ***Abdelhady Mahmoud****, and Karu Esselle "Enhancing Radiation Characteristics of Antenna Arrays over a Sparse Area"2024 IEEE International Symposium on Antennas and Propagation and INC/USNC-URSI Radio Science Meeting (AP-S/INC-USNC-URSI), July 2024.*

[21] *G. -L. Huang,* ***M. Abdelhady****, Z. -Y. Pang and J. -J. Liang, "Broadband Flat-Gain Transmitarray," 2021 International Applied Computational Electromagnetics Society (ACES-China) Symposium, Chengdu, China, 2021, pp. 1-2.*

[20] *M. S. Ibrahim,* ***A. Mahmoud****, A. Awamry, Z. H. Jiang, W. Hong and M. Al-Nuaimi, "Design and Fabrication of Engineered Reflector for Wideband Linear-to-Circular Polarization Converter," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, 2019, pp. 1697-1698.*

[19] *M. S. Ibrahim,* ***A. Mahmoud****, A. Awamry, Z. H. Jiang, W. Hong and M. Al-Nuaimi, "Wideband Anisotropic Unit Cell Design for Perfect Cross-Polarization Conversion," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, 2019, pp. 1831-1832.*

[18] *S. Gaya, H. Attia, S. I. Sheikh****, A. Mahmoud*** *and M. S. Sharawi, "A Yagi-Uda Pattern Reconfigurable Antenna for WiMAX Application," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, 2019, pp. 679-680*

[17] *J. Nourinia, C. Ghobadi, B. Mohammadi****, A. Mahmoud*** *and I. Aryanian, "RCS Reduction of Reflectarray Antenna Backed with Sub-Wavelength Frequency Selective Surface,"* 2019 27th *Iranian Conference on Electrical Engineering* (ICEE)*, 2019, pp. 1627-1631*

[16] *Mustafa K.T. A., Wei Hong,* ***Abdelhady M.****," Design of High Gain Reflectarray Antenna for 77GHz Applications", APCAP 2017, China.*

[15] *Mustafa K.T. A., Wei Hong,* ***Abdelhady M.****," Design of Cross Polarization Conversion Metasurface Using Dumbbell-Like Unit Cell", APCAP 2017, China.*

[14] *Maher K., Abdel Fattah F., Ahmed A.,* ***Abdelhady M.****, Thomas K., "Printable, High Coding Capacity Chipless RFID Tags for Low Cost Item Tagging" ICNSC 2017.*

[13] *Mustafa K.T. A., Wei Hong, Gaoxi Qi,* ***Abdelhady M.****," Design of Reflective Surface for Cross Polarization Conversion and RCS Reduction" 2017 International Applied Computational Electromagnetics Society Symposium (ACES), Suzhou, 2017, pp. 1-2.*

[12] ***Abdelhady M.****; Hussein A. "Wide-band Circularly Polarized Dielectric Resonator Antenna Array" 2017 IEEE International Symposium on Antennas*

and Propagation & USNC/URSI National Radio Science Meeting, San Diego, CA, 2017, pp. 1521-1522.

[11] ***Abdelhady M.**; Noha A., Shaymaa G., "Circularly Polarized Chamfer Shaped DRA Array" 43th National Radio Science Conference (NRSC 2017), Egypt.*

[10] ***Mohamed, A-E.**; Kishk, A." Folded reflectarray with dually polarized cells" Antennas and Propagation (EuCAP), 2015 9th European Conference on Antennas and Propagation. pp.1- 4, 2015.*

[9] ***Mohamed, A.**; Kishk, A. "Ka-band dual mode circularly polarized reflectarray" 2014 16th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Victoria, Canada.*

[8] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Electronically Tunable Dielectric Resonator Reflectarray" 2014 16th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Victoria, Canada.*

[7] ***Abd-Elhady. M.A**, Saber H. Zainud-Deen, A.A. Mitkees, and A.A. Kishk "Dual Polarized Dual Feed Aperture-Coupled DRA Reflectarray" 29th National Radio Science Conference (NRSC 2012), Faculty of Engineering, Cairo Univ., Egypt, pp. 97-102, April 2012.*

[6] *Y. Zhang, **M. Abd-Elhady**, W. Hong and W. Li, "Research progress on millimeter wave transmitarray in SKLMMW,"* 2012 4th International High Speed Intelligent Communication Forum*, Nanjing, China, 2012, pp. 1-2*

[5] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "X-Band Linear Polarized Aperture-Coupled DRA Reflectarray," 2010 International Conference on Microwave and Millimeter Wave Technology, Chengdu, China, pp. 1042 – 1044, 2010.*

[4] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Slot-Loading Rectangular Dielectric Resonator Elements Reflectarray ",1st Middle East Conference on Antennas and Propagation, (MECAP), Cairo, Egypt, pp. 1-3, October 2010.*

[3] *S.H. Zainud-Deen, **A.M. Abd-Elhady**, A.A. Mitkees, and Ahmed A. Kishk, "Dielectric Resonator Reflectarray with Two DRA Sizes and Varying Slot Loading," 2010 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, Toronto, Canada, pp.1-4, July 2010.*

[2] *S.H. Zainud-Deen, **A.M. Abd-Elhady**, A.A. Mitkees, and Ahmed A. Kishk, "Design of Reflectarray Employing Rectangular Dielectric Resonator Elements of Variable Sizes," The 26th Annual Review of Progress in Applied Computational Electromagnetics, Tampere, Finland, pp. 813-816, April 26-29, 2010.*

[1] *S.H. Zainud-Deen, **Abd-Elhady**, A.A. Mitkees and A.A. Kishk, "Design of Dielectric Resonator Reflectarray Using Full-Wave Analysis," 26th National Radio Science Conference (NRSC 2009), Faculty of Engineering, Future Univ., Egypt, pp. 1-9, March 2009.*

Conference Presentation:

[1] *S.H. Zainud-Deen, **Abd-Elhady**, A.A. Mitkees and A.A. Kishk, "Design of Dielectric Resonator Reflectarray Using Full-Wave Analysis," 26th National Radio Science Conference (NRSC 2009), Faculty of Engineering, Future Univ. , Egypt, pp. 1-9, March 2009.*

[2] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Slot-Loading Rectangular Dielectric Resonator Elements Reflectarray ", 1st Middle East Conference on Antennas and Propagation, (MECAP), Cairo, Egypt, pp. 1-3, October 2010.*

[3] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "X-Band Linear Polarized Aperture-Coupled DRA Reflectarray," 2010 International Conference on Microwave and Millimeter Wave Technology, Chengdu, China, pp. 1042 – 1044, 2010.*

[4] ***A.M. Abd-Elhady**, S.H. Zainud-Deen, A.A. Mitkees and Ahmed A. Kishk, "Electronically Tunable Dielectric Resonator Reflectarray" 2014 16th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Victoria, Canada.*

[5] ***Mohamed, A.**; Kishk, A. "Ka-band dual mode circularly polarized reflectarray" 2014 16th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Victoria, Canada.*

Honors & Awards

1) Education Excellence award Jun 2025- Benha University
2) Education Excellence award Jan 2025- Benha University
3) Education Excellence award Jun 2024- Benha University
4) Education Excellence award Jan 2024- Benha University
5) Education Excellence award Jun 2023- Benha University
6) Education Excellence award Jan 2023- Benha University
7) Education Excellence award Jun 2022- Benha University
8) Education Excellence award Jan 2022- Benha University
9) Education Excellence award Jan 2020- Benha University
10) Education Excellence award Jun 2019- Benha University
11) Education Excellence award Jan 2019- Benha University
12) Education Excellence award Jan 2018- Benha University
13) Education Excellence award Jun 2017- Benha University
14) Education Excellence award Jun 2016- Benha University
15) Education Excellence award Jan 2016- Benha University
16) Post-Doctoral Fellowship, Concordia University, Quebec 2013-2015
17) PhD Scholarship, Southeast University, Nanjing, China 2010-2012
18) Second rank among B.Sc. students of Faculty of Engineering, Benha University, Egypt, 2000.

Scientific and Professional Activities

- Reviewer, IEEE Antennas and Wireless Propagation Letters.
- Reviewer, Journal International Journal of Electronics and Communications, Elsevier.
- Reviewer, Progress In Electromagnetics Research Symposium.

Experiences:

- Antennas R/D – VNA Measurements- Near-field Measurements – Far-field Measurements.
- NSI planar pattern scanner 8 GHz to 50 GHz.
- Terahertz spectroscopy (330 GHz).
- Agilent PNA E8361C up to 67 GHz.
- Antennas Simulation packages: CST Microwave Studio- HFSS
- Educational Undergraduate projects (9 years).
- High gain Broad-band planar arrays.
- Low Profile Reflectarray (CP and LP).
- Folded Reflectarray.
- Scanning Reflectarray.
- Broad-band CP arrays (DRA and low-profile structures).
- Wide-band Flat Gain Transmitarray.
- Ridge Gap Waveguides.
- Printed Ridge Gap Structures.
- Slim THz Lens.
- Artificial Flat Lens.
- Periodic Structures.
- Passive RFID Tags.
- Dual Polarized OMT Horns.

- Flat Panel Antennas.
- Base station antennas design (printed circuit and whole metallic (sub 6GHz band, 698-960-1710-2690MHz) (+45/-45 2G, 3G and LTE base station.)

Research Interest:

Artificial Lens-Transmitarray- Reflectarray- Folded reflectarray- Broad-band High Gain Antennas- Compact Broad-band compact CP Antennas- THz Lens- UWB Antennas- Mutual coupling reduction- Printed Ridge Gap Antennas- Passive RFID- Low Profile Antennas- 3D Printing Antennas, MIMO antennas, Textile Antenna, Dual Polarized OMT Horns, Polarizer and CP DRA.

Personal Information

- **Nationality: Egyptian**
- Marital status: Married with children