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Publications

Journal Papers

1. T. Naous, A. Elmerie, S. K. Al Khatib, Raed M. Shubair, and **H. M. El Misilmani**, "Machine Learning-Aided Design of Dielectric-Filled Slotted Waveguide Antennas With Specified Sidelobe Levels," in *IEEE Access*, vol. 10, pp. 30583-30595, 2022, doi: 10.1109/ACCESS.2022.3158976.
2. K. Youssef, M. Moussa, M. Al-Husseini, **H. M. El Misilmani**, K. Y. Kabalan, and Ibrahim Didi, "Characteristic Mode Solution of Complex-Coefficient Complex-Solution Differential Equations", 2021 (in press)
3. **H. M. El Misilmani**, M. Al-Husseini, and K. Y. Kabalan, "Design Procedure for Planar Slotted Waveguide Antenna Arrays with Controllable Sidelobe Level Ratio for High Power Microwave Applications," *Engineering Reports*, 2020 ;e12255. <https://doi.org/10.1002/eng2.12255>
4. **H. M. El Misilmani**, T. Naous, and S. K. Al Khatib, "A Review on the Design and Optimization of Antennas Using Machine Learning Algorithms and Techniques," *International Journal of RF and Microwave Computer-Aided Engineering*, doi:10.1002/mmce.22356
5. **H. M. El Misilmani**, T. Naous, S. K. A. Khatib and K. Y. Kabalan, "A Survey on Antenna Designs for Breast Cancer Detection Using Microwave Imaging," in *IEEE Access*, vol. 8, pp. 102570-102594, 2020, doi: 10.1109/ACCESS.2020.2999053
6. A. Damaj, **H. M. El Misilmani**, and S. Abou Chahine, "Miniaturized Dual Band Antennas with Frequency Tunability for Implanted Biomedical Devices", *International Journal of Engineering Research and Technology (IJERT)*, vol. 12, Issue 12, 2019
7. **H. M. El Misilmani**, M. Y. Abou-Shahine, Y. Nasser, and K. Y. Kabalan, "Recent Advances on Radio-Frequency Design in Cognitive Radio," *International Journal of Antennas and Propagation*, Vol. 2016, Article ID 9878475, 16 pages, 2016. doi:10.1155/2016/9878475.
8. **H. M. El Misilmani**, K. Y. Kabalan, M. Abou Shahine, and M. Al-Husseini, "A Method of Moment Approach in Solving Boundary Value Problems," *Journal of Electromagnetic Analysis and Applications*, Vol. 7, Issue 3, March 2015
9. **H. M. El Misilmani**, M. Al-Husseini, and K. Y. Kabalan, "Design of Slotted Waveguide Antennas with Low Sidelobes for High Power Microwave Applications," *Progress in Electromagnetics Research C*, Vol. 56, 15-28, 2015
10. **H. M. El Misilmani**, M. Al-Husseini, and K. Y. Kabalan, "Improved Vlasov Antenna with Curved Cuts and Optimized Reflector Position and Shape," *International Journal of Antennas and Propagations*, Vol. 2015, Article ID 193630, 12 pages, 2015
11. **H. M. El Misilmani**, M. Abou Shahine, M. Al-Husseini, and K. Y. Kabalan, "A Simplified Method of Moment (MoM) Approach to solving nth Order Linear Differential Equations," *Int. Journal of Scientific & Engineering Research*, Vol. 5, Issue 6, June 2014
12. **H. M. El Misilmani**, M. Al-Husseini, K. Y. Kabalan and A. El-Hajj, "Compact Circularly Polarized Multi-Band Antennas for RFID Applications," *International Journal of Antennas and Propagations*, April 2014

Conference Papers

1. S. K. Al Khatib, T. Naous, Raed M. Shubair, and **H. M. El Misilmani**, "Deep Learning for Breast Tumor Detection and Localization from Microwave Imaging Data," 28th IEEE International Conference on Electronics, Circuits & Systems, Dubai, UAE, 2021.
2. **H. M. El Misilmani** and M. Al-Husseini, "1D Slotted Waveguide Antenna with Controlled Beamwidth and Sidelobe Level Ratio," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, USA, 2019, pp. 1421-1422, doi: 10.1109/APUSNCURSINRSM.2019.8888549.
3. **H. M. El Misilmani** and T. Naous, "Machine Learning in Antenna Design: An Overview on Machine Learning Concept and Algorithms," 2019 International Conference on High Performance Computing & Simulation (HPCS), Dublin, Ireland, 2019, pp. 600-607, doi: 10.1109/HPCS48598.2019.9188224.
4. A. Damaj, **H. M. El Misilmani** and S. A. Chahine, "Miniaturized Implantable Coplanar Waveguide Antenna for Biomedical Applications," 2019 International Conference on High Performance Computing & Simulation (HPCS), Dublin, Ireland, 2019, pp. 608-611, doi: 10.1109/HPCS48598.2019.9188130.

5. **H. El Misilmani**, M. Al-Husseini and K. Kabalan, "Design Procedure of Two-Dimensional Circularly Polarized Slotted Waveguide Antenna Arrays," 2018 International Conference on High Performance Computing & Simulation (HPCS), Orleans, 2018, pp. 83-86, doi: 10.1109/HPCS.2018.00028.
6. A. W. Damaj, **H. M. El Misilmani** and S. A. Chahine, "Implantable Antennas for Biomedical Applications: An Overview on Alternative Antenna Design Methods and Challenges," 2018 International Conference on High Performance Computing & Simulation (HPCS), Orleans, 2018, pp. 31-37, doi: 10.1109/HPCS.2018.00019.
7. **H. M. El Misilmani** and A. M. El-Hajj, "Massive MIMO Design for 5G Networks: An Overview on Alternative Antenna Configurations and Channel Model Challenges," 2017 International Conference on High Performance Computing & Simulation (HPCS), Genoa, 2017, pp. 288-294, doi: 10.1109/HPCS.2017.52.
8. **H. M. El Misilmani**, M. Al-Husseini, and K. Y. Kabalan, "Simple Design Procedure for 2D SWAs with Specified Sidelobe Levels and Inclined Coupling Slots," in the 4th Advanced Electromagnetic Symposium (AES 2016), Spain, July 2016
9. M. Al-Husseini, **H. M. El Misilmani**, K. Y. Kabalan, A. El-Hajj, and E. Nassar, "Simple Design Method for Dielectric-Filled Low-Sidelobe Slotted Waveguide Antennas," in the 4th Advanced Electromagnetic Symposium (AES 2016), Spain, July 2016
10. **H. M. El Misilmani**, K. Y. Kabalan, A. El-Hajj and M. Al-Husseini, "Design procedure for 2D slotted waveguide antenna with controllable sidelobe level," 2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, Vancouver, BC, 2015, pp. 216-217, doi: 10.1109/APS.2015.7304494
11. M. Al-Husseini, **H. M. El Misilmani**, K. Y. Kabalan, A. El-Hajj, X. Pan and C. G. Christodoulou, "Controllable-sidelobe slotted waveguide antennas with corrugations for frequency selectivity," 2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, Vancouver, BC, 2015, pp. 214-215, doi: 10.1109/APS.2015.7304493
12. **H. M. El Misilmani**, M. Al-Husseini, and K. Y. Kabalan, "Design Procedure for 2D Slotted Waveguide Antenna with Inclined Coupling Slots for Sidelobe Level Control," in the Progress in Electromagnetics Research Symposium (PIERS), Prague, July 2015
13. **H. M. El Misilmani**, K. Y. Kabalan M. Abou Shahine, and M. Al-Husseini, "A Method of Moment Approach in Solving Boundary Value Problems," in the First Irbid International Engineering Conference (IIEC), Jordan, October 2014
14. **H. M. El Misilmani**, M. Al-Husseini, K. Y. Kabalan and A. El-Hajj, "A Design Procedures for Slotted Waveguide Antennas with Specified Sidelobe Levels," in the High Performance Computing & Simulation Conference (HPCS), Italy, July 2014
15. **H. M. El Misilmani**, M. Al-Husseini, K. Y. Kabalan and A. El-Hajj, "Improved Antennas for High Power Microwave Applications," in the Lebanese Association for the Advancement of Science, Lebanon, March 2014
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17. **H. M. El Misilmani**, M. Al-Husseini, K. Y. Kabalan and A. El-Hajj, "Improved Vlasov Antenna with Curved Cuts for High Power Microwaves," in the High Performance Computing & Simulation Conference (HPCS), Helsinki, Finland, July 2013
18. **H. M. El Misilmani**, M. Al-Husseini, K. Y. Kabalan and A. El-Hajj, "A Simple Miniaturized Triple-band Antenna for WLAN/WiMAX Applications," in Progress In Electromagnetics Research Symposium (PIERS), Moscow, Russia, August 2012