



1. **Name and Academic rank:** Heba EL-Halabi, Assistant Professor, full time
2. **Education: Degrees, discipline, institution and date:**
Ph.D., Communication and Electronics Engineering, Beirut Arab University, 2017
M.E., Communication and Electronics Engineering, Beirut Arab University, 2003
B.E., Communication and Electronics Engineering, Beirut Arab University, 1997
3. **Academic experience**
 - Beirut Arab University, Assistant Professor, 2017- Present, full time
 - Beirut Arab University, Lecturer, 2013- 2017, full time
 - Beirut Arab University, TA, 1998-2012, full time
4. **Research Interests**
 - Microwave engineering and RF systems
5. **Current membership in professional organizations**
 - IEEE
6. **Service activities**
 - 2023-2026 Coordinator of Communication program-Beirut Arab University
 - 2020-2024 Scheduling Committee member –BAU
 - 2022-2024 Coordinator of MTC-BAU internship program
 - 2020-2024 Quality assurance member-BAU
 - 2021-2022 Faculty Council member-BAU

7. Principal publications and presentations from the last five years:

7.1 Textbook

None

7.2 Journal Publications

[1] Alhalabi, H., Issa, H., Pistono, E., Kaddour, D., Podevin, F., Abouchahine, S., & Ferrari, P. (2018). Miniaturized branch-line coupler based on slow-wave microstrip lines. *International Journal of Microwave and Wireless Technologies*, 10(10), 1103-1106. doi:10.1017/S1759078718001204

[2] Heba El-Halabi, Hamza Issa, Darine Kaddour, Emmanuel Pistono, Soubhi Abou-Chahine and Philippe Ferrari, " Compact Low-Pass Stepped Impedance Filters with Enhanced Out of Band Response", *Microwave and Optical Technology letters*, vol. 59, pp. 1791-1800, August 2017.

[3] M. K. Fattoum, S. M. Joujou, S. M. Ibrahim and H. El-Halabi, "Compact 5G Broadband Antenna for Sub-6 GHz Wireless Applications," in *IEEE Access*, vol. 13, pp. 79444-79450, 2025, doi: 10.1109/ACCESS.2025.3566448.



[4] M. K. Fattoum et al., "AI-Driven RF Detection of Solutes in Water," in IEEE Access, vol. 14, pp. 32080-32091, 2026, doi: 10.1109/ACCESS.2026.3668747.

[5] Elkhodr, M., El-Halabi, H. & Al-Sabbagh, A. An integrated AI-IoT framework for elderly mental health monitoring: architecture and offline feasibility evaluation. Neural Comput & Applic 38, 682 (2026). <https://doi.org/10.1007/s00521-026-12443-y>

7.3 Conference Proceedings

[1] Heba El-Halabi, Hamza Issa, Darine Kaddour, Emmanuel Pistono, Soubhi Abou-Chahine and Philippe Ferrari, DGS-SMS Compact Fifth Order Low Pass Filter, accepted in the 2017 International Conference on High Performance Computing & Simulation (HPCS 2017), Genoa, Italy, July 17-21, 2017

[2] Heba El-Halabi, Hamza Issa, "A compact stepped impedance 7th order microstrip filter", accepted in the 2018 5th International Conference on Electrical and Electronics Engineering (ICEEE 2018), Istanbul, Turkey, May 4-6, 2018

[3] Hamza Issa, Heba El-Halabi, Daniel Awde, Lara Ezzedine, Batoul EL-Ibrahim, Arij Elhawary "Compact Dual Band LowPass-BandPass Filter", accepted in the 2020 7th International Conference on Electrical and Electronics Engineering (ICEEE 2020), Antalya, Turkey, April 14-16, 2020

[4] Heba El-Halabi, Manal Fattoum "Dual Band Branch-Line Coupler using Stub-Loaded Lines", accepted in the 2022 6th International Conference on Technology, Engineering and Science (IConTES2022), Antalya, Turkey, November 16-19, 2022

[5] H. El-Halabi, H. Moughnieh, L. El Nakouzi, N. Harb, O. Kabbani and M. K. Fattoum, "Compact Dual Band Branch Line Coupler for Wireless Applications," 2023 IEEE 3rd International Maghreb Meeting of the Conference on Sciences and Techniques of Automatic Control and Computer Engineering (MI-STA), Benghazi, Libya, 2023, pp. 526-529, doi: 10.1109/MI-STA57575.2023.10169281.

[6] H. EL-Halabi, M. K. Fattoum, M. Khatib and A. Itani, "Dual Band Circular Patch Antenna for GPS and WiMAX Applications," 2023 IEEE 3rd International Maghreb Meeting of the Conference on Sciences and Techniques of Automatic Control and Computer Engineering (MI-STA), Benghazi, Libya, 2023, pp. 691-695, doi: 10.1109/MI-STA57575.2023.10169435.

[7] A. Daher, M. Ayache, H. EL-Halabi, M. K. Fattoum and O. Hajj, "Wireless Healthcare Monitoring System for Heart Diseases Classification using Efficient ECG-Based Wave Modeling and Machine Learning Techniques," 2023 Fifth International Conference on Advances in Computational Tools for Engineering Applications (ACTEA), Zouk Mosbeh, Lebanon, 2023, pp. 19-24, doi: 10.1109/ACTEA58025.2023.10193969.

[8] H. Z. Akila and H. El-Halabi, "A Compact UWB antenna with Dual-Reject Band," 2023 IEEE 4th International Multidisciplinary Conference on Engineering Technology (IMCET), Beirut,



Lebanon, 2023, pp. 218-222, doi: 10.1109/IMCET59736.2023.10368240.

[9] H. El-Halabi, A. Itani, M. A. Khatib and K. Kahwaji, "Hexagonal Patch Antenna for Ultra Wide Band Applications," 2023 IEEE 4th International Multidisciplinary Conference on Engineering Technology (IMCET), Beirut, Lebanon, 2023, pp. 229-232, doi: 10.1109/IMCET59736.2023.10368251.

[10] H. Issa and H. El-Halabi, "Compact 1:2 Wilkinson Power Divider using Slow-Wave Transmission lines," 2025 5th IEEE Middle East and North Africa Communications Conference (MENACOMM), Byblos, Lebanon, 2025, pp. 1-6, doi: 10.1109/MENACOMM62946.2025.10911040.

[11] K. El Hajj, B. Saad, H. El-Halabi and Z. Osman, "Design and Performance Analysis of a High-Efficiency 5G RF Front -End Receiver," 2026 IEEE 5th International Multidisciplinary Conference on Engineering Technology (IMCET), Beirut, Lebanon, 2026, pp. 1-6, doi: 10.1109/IMCET69180.2026.11503756.

8. Professional development activities from the last five years:

- Professional AI & DataScience Diploma from the American University of Beirut, 2025
- AI starter kit from the American University of Beirut, 2026