

References

- [1] A. Kiourti, K. A. Psathas, and K. S. Nikita, "Implantable and ingestible medical devices with wireless telemetry functionalities: A review of current status and challenges," *Bioelectromagnetics*, vol. 35, no. 1, pp. 1–15, Jan. 2015.
- [2] F. Faisal, M. Zada, A. Ejaz, Y. Amin, S. Ullah, and H. Yoo, "A miniaturized dual-band implantable antenna system for medical applications," *IEEE Trans. Antennas Propag.*, vol. 68, no. 2, pp. 1161–1165, Feb. 2020.
- [3] I. A. Shah, M. Zada, and H. Yoo, "Design and analysis of a compact-sized multiband spiral-shaped implantable antenna for scalp implantable and leadless pacemaker systems," *IEEE Trans. Antennas Propag.*, vol. 67, no. 6, pp. 4230–4234, Jun. 2019.
- [4] H. Bahrami, S. A. Mirbozorgi, R. Ameli, L. A. Rusch, and B. Gosselin, "Flexible, polarization-diverse UWB antennas for implantable neural recording systems," *IEEE Trans. Biomed. Circuits Syst.*, vol. 10, no. 1, pp. 38–48, Feb. 2016.
- [5] Menteri Komunikasi dan Informatika, "Peraturan Menteri Komunikasi dan Informatika Nomor 161 tahun 2019 tentang Persyaratan Teknis Alat dan/atau Perangkat Telekomunikasi Short Range Device," 2019.
- [6] W. Greatbatch and C. F. Holmes, "History of implantable devices," *IEEE Engineering in Medicine and Biology Magazine*, vol. 10, no. 3, pp. 38–41, Sept. 1991, doi: 10.1109/51.84185.
- [7] Ofcom Organization United Kingdom, "Frequency bands designated for industrial, scientific and medical (ISM) use."
- [8] M. Ehab, M. A. Tawfik, M. U. Munir, A. Ahmed, and J. -H. Park, "ISM-Band Frequency Transformer Modeling for Isolated High-Power Conversions," *IEEE Trans. Instrum. Meas.*, vol. 72, pp. 1–11, 2023, Art no. 8002111, doi: 10.1109/TIM.2023.3261921.

- [9] V. A. Ridho, S. B. Utomo, and D. Setiabudi, "Perancangan dan Realisasi Antena Mikrostrip 700MHz Model Patch Circular Dengan Metode Linear Array Sebagai Penerima TV Digital," *Elektronik Jurnal Arus Elektro Indonesia*, p. 5, 2019.
- [10] D. M. Dobkin, *RF Engineering for Wireless Networks: Hardware, Antennas, and Propagation*, Amsterdam: Elsevier/Newnes, 2005.
- [11] M. K. Ibrahim, H. H. Ryanu, and L. O. Nur, "Perancangan Antena Ultra-wideband Monopol Planar dengan Struktur UC-EBG," *SENTER*, pp. 141–148, Apr. 2023.
- [12] J. Lu, H. C. Zhang, P. H. He, L. P. Zhang, and T. J. Cui, "Design of Miniaturized Antenna Using Corrugated Microstrip," *IEEE Trans. Antennas Propag.*, vol. 68, no. 3, pp. 1918-1924, Mar. 2020, doi: 10.1109/TAP.2019.2963209.
- [13] *Metamaterials: Physics and Engineering Explorations*. Available: <https://ieeexplore.ieee.org/servlet/opac?bknumber=5236499>
- [14] Y. Manwal, S. Bisht, S. Kumari, S. Rai, and B. Chauhan, "Literature Review On Wearable Textile Antennas," pp. 35–39, 2016.
- [15] NIREMF, "An Internet resource for the calculation of the Dielectric Properties of Body Tissues in the frequency range 10 Hz - 100 GHz." Available: <http://niremf.ifac.cnr.it/tissprop/>
- [16] ICNIRP, "ICNIRP GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC AND ELECTROMAGNETIC FIELDS (UP TO 300 GHZ)," *Health Physics*, vol. 74, no. 4, pp. 494-522, 1998.
- [17] "IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz, IEEE Std C95.1-2019, pp. 1-312, Oct. 2019, doi: 10.1109/IEEESTD.2019.9238523.
- [18] Federal Communications Commissions, "Consumer Guide for Wireless Devices and Health Concerns," Oct. 29, 2020.
- [19] H. Abbasi, M. N. Naseer, Y. Wahab, M. M. Siddiqi, R. Aina, N. Alias, and H. Hussin, "Design and analysis of rectangular microstrip patch antenna at 2.4 and 5

GHz," in *AIP Conference Proceedings*, vol. 2347, Art no. 020212, 2021, doi: 10.1063/5.0052217.

[20] A. I. Sabbah, N. I. Dib, and M. A. Al-Nimr, "SAR and Temperature Elevation in a Multi-Layered Human Head Model Due to an Obliquely Incident Plane Wave," *Progress In Electromagnetics Research M*, vol. 13, pp. 95–108, 2010, doi: 10.2528/PIERM10051502.

[21] Y. Liao, M. S. Leeson, and M. D. Higgins, "A Communication Link Analysis Based on Biological Implant Wireless Body Area Networks," *ACES Journal*, vol. 31, no. 6, Jun. 2016.

[22] M. Kaffa, M. Sudjai, and B. Nugroho, "UWB Antenna Optimization Using Linear Regression for Wireless Capsule Endoscopy Application in WBAN," in *Proceedings of the 2019 International Conference on Advanced Communications Technology (ICACT)*, 2020, doi: 10.4108/eai.11-7-2019.2297770.

[23] K. Y. Yazdandoost, "Antenna for Wireless Capsule Endoscopy at Ultra Wideband Frequency," in *Proceedings of the 2016 IEEE 27th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, Valencia, Spain, 2016.

[24] "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," *IEEE Std C95.1-1991*, pp. 1-76, Apr. 1992, doi: 10.1109/IEEESTD.1992.101091.

[25] Federal Communications Commission, "Medical Implant Communications Service in the 402-405 MHz Band," 2020.

[26] Federal Communications Commission, "Wireless Medical Telemetry Service," Jul. 17, 2000.

[27] S. H. Barrett, C. A. Morgante, and M. D. Morley, "Battery Technology for Implantable Medical Devices," *IEEE Trans. Biomed. Eng.*, vol. 65, no. 5, pp. 1005-1014, May 2018, doi: 10.1109/TBME.2018.2795634.

[28] ETSI European Telecommunications Standards Institute, "ETSI EN 300 328 V2.2.2 (2019-07): Wideband transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques;

Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU," 2019.

[29] ANSI American National Standards Institute, "ANSI C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices," 2020.

[30] Japanese Industrial Standards Committee, "JIS C 1311: Testing procedures of radio equipment for non-specific short-range devices," 2021.

[31] A. Kiourti and K. S. Nikita, "A Review of Implantable Patch Antennas for Biomedical Telemetry: Challenges and Solutions," *IEEE Antennas Propag. Mag.*, vol. 54, no. 3, pp. 210-228, Jun. 2012.

[32] B. C. Wadell, *Transmission Line Design Handbook*, Norwood, MA: Artech House, 1991.