DAFTAR PUSTAKA

[1] D. U. Campos-delgado and S. Member, “5G and Beyond : Past , Present and Future of the Mobile Communications,” vol. 19, no. 10, pp. 1702–1736, 2021.

[2] C. A. Balanis, *Antenna Theory*, 3rd Editio. 2005.

[3] Y. Christyono, I. Santoso, and R. D. Cahyo, “PERANCANGAN ANTENA MIKROSTRIP ARRAY PADA FREKUENSI 850 MHz,” *Transmisi*, vol. 18, no. 2, pp. 87–95, 2016, doi: 10.12777/transmisi.18.2.87-95.

[4] H. Attia, L. Yousefi, and O. M. Ramahi, “Analytical model for calculating the radiation field of microstrip antennas with artificial magnetic superstrates: Theory and experiment,” *IEEE Trans. Antennas Propag.*, vol. 59, no. 5, pp. 1438–1445, 2011, doi: 10.1109/TAP.2011.2122295.

[5] M. Bozzi, A. Georgiadis, and K. Wu, “Review of substrate-integrated waveguide circuits and antennas,” *IET Microwaves, Antennas Propag.*, vol. 5, no. 8, pp. 909–920, 2011, doi: 10.1049/iet-map.2010.0463.

[6] A. Saputra, N. Ismail, and A. Munir, “Perancangan Antena Mikrostrip Berbasis Substrate Integrated Waveguide (SIW) untuk Aplikasi WLAN,” pp. 119–122, 2018.

[7] E. K. I. Hamad and A. Abdelaziz, “Metamaterial superstrate microstrip patch antenna for 5G wireless communication based on the theory of characteristic modes,” *J. Electr. Eng.*, vol. 70, no. 3, pp. 187–197, 2019, doi: 10.2478/jee-2019-0027.

[8] P. Studi, T. Elektro, F. Teknik, and U. Riau, “Untuk Meningkatkan Gain Dan Bandwidth Pada Mimo Microstrip Patch Array Untuk Jaringan 5G,” vol. 6, pp. 1–10, 2019.

[9] T. Peneliti and P. Sdppi, *Studi Lanjutan 5G Indonesia 2018 Spektrum Outlook dan Use Case untuk Layanan 5G Indonesia*. 2018.

[10] F. Rizqa, D. Arseno, and T. Yunita, “Analisis Dan Desain Antena Mikrostrip

Untuk Komunikasi Satelit Pada Frekuensi Ka-Band," *Avitec*, vol. 1, no. 2, pp. 1–12, 2020, doi: 10.28989/avitec.v2i1.590.

[11] A. H. Rambe, "Antena Mikrostrip: Konsep dan Aplikasinya," *JiTEKH*, vol. 01, no. I, pp. 86–92, 2012.

[12] R. Widianto and E. Safrianti, "ANALISA HASIL SIMULASI ANTENA ANTENA MIKROSTRIP YAGI PADA FREKUENSI KERJA 1,9-2,1 GHZ MENGGUNAKAN APLIKASI ANSOFT HSFF VERSI.13.0," *ISSN 2502-3632 ISSN 2356-0304 J. Online Int. Nas. Vol. 7 No.1, Januari – Juni 2019 Univ. 17 Agustus 1945 Jakarta*, vol. 53, no. 9, pp. 1689–1699, 2019, [Online]. Available: www.journal.uta45jakarta.ac.id.

[13] M. Sholeh and Y. Rahayu, "Perancangan Antena Mimo Array 37 Ghz Untuk Jaringan Komunikasi 5G," *J. Nas. Tek. Elektro*, vol. 5, no. 2, pp. 1–9, 2018.

[14] S. Laboratory, "Modul Antena Dan Propagasi," pp. 0–7, 2020.

[15] G. Kumar and K. P. Ray, *Novel broadband microstrip antenna*, vol. 2. Boston, London: Artech House, 2003.

[16] N. G. Alexópoulos and D. R. Jackson, "Fundamental Superstrate (Cover) Effects on Printed Circuit Antennas," *IEEE Trans. Antennas Propag.*, vol. 32, no. 8, pp. 807–816, 1984, doi: 10.1109/TAP.1984.1143433.

[17] R. Garg, P. Bhartia, I. Bahl, and A. Ittipiboon, *Microstrip Antenna Design Handbook*. Boston, London: Artech House, 2001.

[18] X. Hui and A. A. Kishk, *Analysis and Design of Substrate IntegratedWaveguide Using Efficient 2D Hybrid Method*. Morgan&Claypool, 2010.