## **Bibliography**

- [1] ITU-R. *IMT Vision Framework and overall objectives of the future development of IMT for 2020 and beyond*. Tech. rep. International Telecommunication Union, Sept. 2015.
- [2] Su, Y., Liu, Y., Zhou, Y., Yuan, J., Cao, H., and Shi, J. "Broadband LEO Satellite Communications: Architectures and Key Technologies". In: *IEEE Wireless Communications* 26.2 (2019), pp. 55–61. DOI: 10.1109/MWC.2019.1800299.
- [3] Liao, Q., Fonseca, N. J. G., and Quevedo-Teruel, O. "Compact Multibeam Fully Metallic Geodesic Luneburg Lens Antenna Based on Non-Euclidean Transformation Optics". In: *IEEE Transactions on Antennas and Propagation* 66.12 (2018), pp. 7383–7388. DOI: 10.1109/TAP.2018.2872766.
- [4] Fonseca, Nelson J. G., Liao, Qingbi, and Quevedo-Teruel, Oscar. "Equivalent Planar Lens Ray-Tracing Model to Design Modulated Geodesic Lenses Using Non-Euclidean Transformation Optics". In: *IEEE Transactions on Antennas and Propagation* 68.5 (2020), pp. 3410–3422. DOI: 10.1109/TAP.2020.2963948.
- [5] Petek, M., Zetterstrom, O., Pucci, E., Fonseca, N. J. G., and Quevedo-Teruel, O. "Fully-Metallic Rinehart-Luneburg Lens at 60 GHz". In: 2020 14th European Conference on Antennas and Propagation (EuCAP). 2020, pp. 1–5. DOI: 10.23919/EuCAP48036.2020.9135587.
- [6] Lianming, Li, Jiachen, Si, and Linhui, Chen. "Design of Power Amplifier for mm Wave 5G and Beyond". In: *IEEE Transactions on Antennas and Propagation* 36.4 (2019), pp. 579–588. DOI: 10.16356/j.1005-1120.2019.04.004.

- [7] Roev, A., Taghikhani, P., Maaskant, R., Fager, C., and Ivashina, M. V. "A Wideband and Low-Loss Spatial Power Combining Module for mm-Wave High-Power Amplifiers". In: *IEEE Access* 8 (2020), pp. 194858–194867. DOI: 10.1109/ACCESS.2020.3033623.
- [8] Kang, Y., Jin Pin, X., and Zheng Hua, C. "A full Ka-band waveguide-based spatial power-combining amplifier using e-plane anti-phase probes". In: *2014 IEEE International Wireless Symposium (IWS 2014)*. 2014, pp. 1–4. DOI: 10.1109/IEEE-IWS.2014.6864257.
- [9] Peeler, G. and Coleman, H. "Microwave stepped-index luneberg lenses". In: *IRE Transactions on Antennas and Propagation* 6.2 (1958), pp. 202–207. DOI: 10.1109/TAP.1958.1144575.
- [10] Dockrey, J. A., Lockyear, M. J., Berry, S. J., Horsley, S. A. R., Sambles, J. R., and Hibbins, A. P. "Thin metamaterial Luneburg lens for surface waves". In: *Phys. Rev. B* 87 (12 Mar. 2013), p. 125137. DOI: 10.1103/PhysRevB.87.125137. URL: https://link.aps.org/doi/10.1103/PhysRevB.87.125137.
- [11] Pfeiffer, C. and Grbic, A. "A Printed, Broadband Luneburg Lens Antenna". In: *IEEE Transactions on Antennas and Propagation* 58.9 (2010), pp. 3055–3059. DOI: 10.1109/TAP.2010.2052582.
- [12] Manholm, L., Brazalez, A. A., Johansson, M., Miao, J., and Quevedo-Teruel, O. "A two-dimensional all metal luneburg lens using glide-symmetric holey metasurface". In: *12th European Conference on Antennas and Propagation* (EuCAP 2018). 2018, pp. 1–3. DOI: 10.1049/cp.2018.0795.
- [13] Rinehart, R. F. "A Family of Designs for Rapid Scanning Radar Antennas". In: *Proceedings of the IRE* 40.6 (1952), pp. 686–688. DOI: 10.1109/JRPROC.1952.274061.
- [14] Fonseca, Nelson J.G., Liao, Qingbi, and Quevedo-Teruel, Oscar. "Compact parallel-plate waveguide half-Luneburg geodesic lens in the Ka-band". In: *IET Microwaves, Antennas & Propagation* 15.2 (2021), pp. 123–130. DOI: https://doi.org/10.1049/mia2.12028. URL: https://ietresearch.onlinelibrary.wiley.com/doi/abs/10.1049/mia2.12028.
- [15] York, R. A. "Some considerations for optimal efficiency and low noise in large power combiners". In: *IEEE Transactions on Microwave Theory and Techniques* 49.8 (2001), pp. 1477–1482. DOI: 10.1109/22.939929.

- [16] Chou, H.-T., Chang, S.-C., and Huang, H.-J. "Multibeam Radiations From Circular Periodic Array of Vivaldi Antennas Excited by an Integrated 2-D Luneburg Lens Beamforming Network". In: *IEEE Antennas and Wireless Propagation Letters* 19.9 (2020), pp. 1486–1490. DOI: 10.1109/LAWP.2020.3006561.
- [17] Balanis, Constantine A. *Antenna theory: analysis and design*. John wiley & sons, 2016.
- [18] "Circular Array Theory". In: Conformal Array Antenna Theory and Design.

  John Wiley Sons, Ltd, 2006. Chap. 2, pp. 15–47. ISBN: 9780471780120. DOI: https://doi.org/10.1002/047178012X.ch2.
- [19] "Conformal Array Pattern Synthesis". In: *Conformal Array Antenna Theory and Design*. John Wiley Sons, Ltd. Chap. 10, pp. 395–420. ISBN: 9780471780120. DOI: https://doi.org/10.1002/047178012X.ch10.
- [20] Gomanne, S., Fonseca, N. J. G., Jankovic, P., Galdeano, J., Toso, G., and Angeletti, P. "Rotman Lenses with Ridged Waveguides in Q-Band". In: 2020 14th European Conference on Antennas and Propagation (EuCAP). 2020, pp. 1–5. DOI: 10.23919/EuCAP48036.2020.9135218.
- [21] Gomanne, Sophie, Fonseca, Nelson, Jankovic, Petar, Toso, Giovanni, and Angeletti, Piero. "Comparative Study of Waveguide Rotman Lens Designs for Q/V Band Applications". In: Oct. 2019.
- [22] Molaei, B. and Khaleghi, A. "A Novel Wideband Microstrip Line to Ridge Gap Waveguide Transition Using Defected Ground Slot". In: *IEEE Microwave and Wireless Components Letters* 25.2 (2015), pp. 91–93. DOI: 10.1109/LMWC.2014.2382658.
- [23] Huang, X. and Wu, K. "A Broadband U-Slot Coupled Microstrip-to-Waveguide Transition". In: *IEEE Transactions on Microwave Theory and Techniques* 60.5 (2012), pp. 1210–1217. DOI: 10.1109/TMTT.2012.2187677.
- [24] Yang, L., Zhu, L., Choi, W., and Tam, K. "Wideband vertical microstrip-to-microstrip transition designed with cross-coupled microstrip/slotline resonators". In: *2015 Asia-Pacific Microwave Conference* (*APMC*). Vol. 2. 2015, pp. 1–3. DOI: 10.1109/APMC.2015.7413129.

- [25] Anand, G., Lahiri, R., and Sadhu, R. "Wide band microstrip to microstrip vertical coaxial transition for radar EW applications". In: *2016 Asia-Pacific Microwave Conference (APMC)*. 2016, pp. 1–4. DOI: 10.1109/APMC.2016.7931432.
- [26] Huang, X. and Wu, K. "A Broadband and Vialess Vertical Microstrip-to-Microstrip Transition". In: *IEEE Transactions on Microwave Theory and Techniques* 60.4 (2012), pp. 938–944. DOI: 10.1109/TMTT.2012.2185945.
- [27] Kumar, G. A. and Poddar, D. R. "Broadband Rectangular Waveguide to Suspended Stripline Transition Using Dendritic Structure". In: *IEEE Microwave and Wireless Components Letters* 26.11 (2016), pp. 900–902. DOI: 10.1109/LMWC.2016.2615009.
- [28] Głogowski, R., Zürcher, J., Peixeiro, C., and Mosig, J. R. "Ka-Band Rectangular Waveguide to Suspended Stripline Transition". In: *IEEE Microwave and Wireless Components Letters* 23.11 (2013), pp. 575–577. DOI: 10.1109/LMWC.2013.2281408.
- [29] Wei Tang and Xiao Bo Yang. "Design of Ka-band probe transitions". In: *2011*International Conference on Applied Superconductivity and Electromagnetic

  Devices. 2011, pp. 25–28. DOI: 10.1109/ASEMD.2011.6145059.
- [30] Montejo-Garai, J. R., Marzall, L., and Popović, Z. "Octave Bandwidth High-Performance Microstrip-to-Double-Ridge-Waveguide Transition". In: *IEEE Microwave and Wireless Components Letters* 30.7 (2020), pp. 637–640. DOI: 10.1109/LMWC.2020.3000283.
- [31] Pozar, D.M. Microwave Engineering, 4th Edition. Wiley, 2011. ISBN: 9781118213636. URL: https://books.google.es/books?id=JegbAAAAQBAJ.