

REFERENCES

- [1] Ericsson, “NB-IoT: A sustainable tech,” Tech. Rep., 2016.
- [2] ITU-R, “IMT vision framework and overall objectives of the future development of imt for 2020 and beyond,” ITU-R, Tech. Rep., September 2015.
- [3] G. Liu, X. Hou, J. Jin, F. Wang, Q. Wang, Y. Hao, Y. Huang, X. Wang, X. Xiao, and A. Deng, “3-D-MIMO with massive antennas paves the way to 5G enhanced mobile broadband: From system design to field trials,” *IEEE Journal on Selected Areas in Communications*, vol. 35, no. 6, pp. 1222–1233, June 2017.
- [4] R. Lombardi, “Millimeter-wave technology trends for 5G and wireless transmission applications and technologies,” in *2017 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP)*, Sept. 2017.
- [5] A. Laya, C. Kalalas, F. V. Gallego, L. Alonso, and J. Alonso-Zarate, “Goodbye, ALOHA!” in *IEEE Access*, vol. 4, 2016.
- [6] Y. E. Wang, X. Lin, A. Adhikary, A. Grövlén, Y. Sui, Y. W. Blankenship, J. Bergman, and H. Shokri-Razaghi, “A primer on 3GPP narrowband internet of things (NB-IoT),” *IEEE Communications Magazine*, vol. 55, March 2017.
- [7] A. A. Purwita and K. Anwar, “Massive multiway relay networks applying coded random access,” *IEEE Transactions on Communications*, vol. 64, no. 10, pp. 4134–4146, October 2016.
- [8] G. Liva, “Graph-based analysis and optimization of contention resolution diversity slotted ALOHA,” *IEEE Trans. on Communications*, vol. 59, no. 2, pp. 477–487, February 2011.
- [9] K. Anwar and M. N. Hasan, “Uncoordinated transmissions in multi-way relaying systems,” in *ITG Conference on Systems, Communications and Coding (SCC)*, Hamburg, Germany, February 2015, pp. 1–5.
- [10] M. N. Hasan and K. Anwar, “Massive uncoordinated multiway relay networks with simultaneous detections,” in *IEEE International Conf. on Comm. Workshop (ICCW)*, London, UK, June 2015, pp. 2175–2180.
- [11] A. Shokrollahi, “Raptor codes,” *IEEE Trans. on Information Theory*, vol. 52, no. 6, pp. 2551–2567, June 2006.

- [12] F. N. Hidayah and K. Anwar, “Low density generator matrix (LDGM)-Based raptor codes for single carrier Internet of Things (SC-IoT),” in *2017 International Conference on Signals and Systems (ICSigSys2017)*, Bali, Indonesia, May 2017.
- [13] I. V. Yuliani and K. Anwar, “Design of LDGM-based raptor codes for broadband internet of things using EXIT chart,” in *2017 International Conference on Signals and Systems (ICSigSys)*, May 2017, pp. 128–133.
- [14] N. Kamila and K. Anwar, “On the design of LDPC-based raptor codes for single carrier internet of things (SC-IoT),” in *2017 International Conference on Signals and Systems (ICSigSys)*, May 2017, pp. 117–122.
- [15] J. W. Byers, M. Luby, M. Mitzenmacher, and A. Rege, “A digital fountain approach to reliable distribution of bulk data,” in *Proceedings of the ACM SIGCOMM '98 Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication*, ser. SIGCOMM '98. New York, NY, USA: ACM, 1998, pp. 56–67.
- [16] K. Nybom and J. Bjerkqvist, “Designing Tornado codes as hyper codes for improved error correcting performance,” in *Proceedings of the Advanced International Conference on Telecommunications (AICT'06)*. IEEE Computer Society Press, 2006.
- [17] S. ten Brink, “Convergence behavior of iteratively decoded parallel concatenated codes,” *IEEE Trans. Commun.*, vol. 49, pp. 1727–1737, Oct. 2001.
- [18] F. J. Vazquez-Araujo, M. G. Lopez, L. Castedo, and J. G. Frias, “Capacity approaching low-rate LDGM codes,” *IEEE Trans. on Communications*, vol. 59, no. 2, pp. 352–356, February 2011.
- [19] K. K. Dave and K. K. Prem, *Algebraic and Stochastic Coding Theory*. CRC Press, 2012.
- [20] R. G. Gallager, “Low-density parity-check codes,” 1963.
- [21] S. T. Brink, “Design of concatenated coding schemes based on iterative decoding convergence,” Ph.D. dissertation, Institute of Telecommunications University of Stuttgart, April 2001.
- [22] B. Sklar, *Digital Communications Fundamentals and Applications*, 2nd ed. Prentice Hall PTR, .
- [23] V. Garg, *Wireless Communications and Networking*. Elsevier, 2007.

- [24] L. Dai, H. Yang, J. Fan, and W. Rao, "Forced-convergence decoding for LDPC-coded modulation," *Science China Information Sciences*, vol. 56, no. 1, pp. 1–11, January 2013.
- [25] F. N. Hidayah, N. M. Adriansyah, and K. Anwar, "Regular Raptor codes based on LDGM with optimal degree distribution for internet of things," in *Wireless Personal Multimedia Communications 2018 (WPMC'18)*, Chiang Rai, Thailand, Nov. 2018.
- [26] E. Zimmermann, W. Rave, and G. Fettweis, "Forced convergence decoding of LDPC codes - EXIT chart analysis and combination with node complexity reduction techniques," in *11th European Wireless Conference 2005 - Next Generation wireless and Mobile Communications and Services*, vol. 12345, no. 12345, April 2005, pp. 1–8.
- [27] A. Abbasfar, D. Divsalar, and K. Yao, "Accumulate repeat accumulate codes," in *International Symposium on Information Theory, 2004. ISIT 2004. Proceedings.*, June 2004, pp. 505–.
- [28] L. Schmalen, S. ten Brink, G. Lechner, and A. Leven, "On threshold prediction of low-density parity-check codes with structure," in *2012 46th Annual Conference on Information Sciences and Systems (CISS)*, March 2012, pp. 1–5.
- [29] S. ten Brink and G. Kramer, "Design of repeat-accumulate codes for iterative detection and decoding," *IEEE Transactions on Signal Processing*, vol. 51, no. 11, pp. 2764–2772, Nov 2003.
- [30] C. B. Schlegel and L. C. Perez, *Trellis and Turbo Coding*, S. V. Kartalopoulos, Ed. Wiley-Interscience, 2004.
- [31] B. Tahir, S. Schwarz, and M. Rupp, "Ber comparison between convolutional, Turbo, LDPC, and Polar codes," in *2017 24th International Conference on Telecommunications (ICT)*, May 2017, pp. 1–7.
- [32] K. Sathananathan and C. Tellambura, "Forward error correction codes to reduce intercarrier interference in OFDM," in *ISCAS 2001. The 2001 IEEE International Symposium on Circuits and Systems (Cat. No.01CH37196)*, vol. 4, May 2001, pp. 566–569 vol. 4.