

REFERENCES

- [1] 3GPP. 2016. LTE: Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer; Measurements (Release 13). <http://www.3gpp.org/dynareport/36214.htm>. (2016).
- [2] 3GPP. 2016. LTE: Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures (Release 13). <http://www.3gpp.org/dynareport/36213.htm>. (2016).
- [3] 3GPP RAN WG 3. 2016. 3GPP Standards for the Internet-of-Things. <https://goo.gl/DAzMLT>. (2016).
- [4] Nicola Bui and Joerg Widmer. 2016. OWL: a Reliable Online Watcher for LTE Control Channel Measurements. In *ACM All Things Cellular (MobiCom Workshop)*. ACM, 25–30.
- [5] F. Capozzi, G. Piro, L. A. Grieco, G. Boggia, and P. Camarda. 2013. Downlink Packet Scheduling in LTE Cellular Networks: Key Design Issues and a Survey. *IEEE Communications Surveys Tutorials* 15, 2 (2013), 678–700.
- [6] Abhijnan Chakraborty, Vishnu Navda, Venkata N. Padmanabhan, and Ramachandran Ramjee. 2013. Coordinating Cellular Background Transfers Using Loadsense. In *Proceedings of ACM MobiCom*. ACM, 63–74.
- [7] Cisco. 2017. Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2016–2021 White Paper. <https://goo.gl/iUQZmQ>. (2017).
- [8] Forbes. 2017. 2017 Roundup Of Internet Of Things Forecasts. <https://goo.gl/bKLCJB>. (2017).
- [9] Yihua Guo, Feng Qian, Qi Alfred Chen, Zhuoqing Morley Mao, and Subhabrata Sen. 2016. Understanding On-device Bufferbloat for Cellular Upload. In *Proceedings of ACM IMC*.
- [10] Sangtae Ha, Soumya Sen, Carlee Joe-Wong, Youngbin Im, and Mung Chiang. 2012. Tube: time-dependent pricing for mobile data. *ACM SIGCOMM Computer Communication Review* 42, 4 (2012), 247–258.
- [11] W. Hu and G. Cao. 2015. Energy-aware video streaming on smartphones. In *2015 IEEE Conference on Computer Communications (INFOCOM)*.
- [12] Junxian Huang, Feng Qian, Alexandre Gerber, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck. 2012. A Close Examination of Performance and Power Characteristics of 4G LTE Networks. In *Proceedings of ACM MobiSys*.
- [13] Junxian Huang, Feng Qian, Yihua Guo, Yuanyuan Zhou, Qiang Xu, Z. Morley Mao, Subhabrata Sen, and Oliver Spatscheck. 2013. An In-depth Study of LTE: Effect of Network Protocol and Application Behavior on Performance. In *Proceedings of ACM SIGCOMM*.
- [14] R. Jain, D. Chiu, and W. Hawe. 1984. *A quantitative measure of fairness and discrimination for resource allocation in shared systems*. Tech. Rep. DEC-TR-301. <http://www1.cse.wustl.edu/~ljljain/papers/ftp/fairness.pdf>
- [15] Juni. 2017. Enterprise Small Cell JL620. <http://www.juniglobal.com/product/jl-620fdd-jlt-621td/>. (2017).
- [16] Swarun Kumar, Ezzeldin Hamed, Dina Katabi, and Li Erran Li. 2014. LTE Radio Analytics Made Easy and Accessible. In *Proceedings of ACM SIGCOMM*.
- [17] Lee, Jihoon and Lee, Jinsung and Im, Youngbin and Dhawaskar Sathyannarayana, Sandesh and Rahimzadeh, Parisa and Zhang, Xiaoxi and Hollingsworth, Max and Joe-Wong, Carlee and Grunwald, Dirk and Ha, Sangtae. 2019. CASTLE SDK. https://github.com/cu-pscr/CASTLE_LIBRARY.git/. (2019).
- [18] Yuanjie Li, Chunyi Peng, Zengwen Yuan, Jiayao Li, Haotian Deng, and Tao Wang. 2016. Mobileinsight: Extracting and Analyzing Cellular Network Information on Smartphones. In *Proceedings of ACM MobiCom*.
- [19] Feng Lu, Hao Du, Ankur Jain, Geoffrey M. Voelker, Alex C. Snoeren, and Andreas Terzis. 2015. CQIC: Revisiting Cross-Layer Congestion Control for Cellular Networks. In *Proceedings of ACM HotMobile*. ACM, 45–50.
- [20] NextEPC Inc. 2019. Open source implementation of LTE EPC. <https://www.nextepc.com/>. (2019).
- [21] Shinik Park, Jinsung Lee, Junseon Kim, Jihoon Lee, Sangtae Ha, and Kyunghan Lee. 2018. ExLL: An Extremely Low-latency Congestion Control for Mobile Cellular Networks. In *Proceedings of ACM CoNEXT*.
- [22] Klaus Ingemann Pedersen, Troels Emil Kolding, Frank Frederiksen, István Zsolt Kovács, Daniela Laselva, and Preben Elgaard Mogensen. 2009. An Overview of Downlink Radio Resource Management for UTRAN Long-term Evolution. *IEEE Comm. Mag.* 47, 7 (July 2009), 86–93.
- [23] Aaron Schulman, Vishnu Navda, Ramachandran Ramjee, Neil Spring, Pralhad Deshpande, Calvin Grunewald, Kamal Jain, and Venkata N. Padmanabhan. 2010. Bartendr: A Practical Approach to Energy-aware Cellular Data Scheduling. In *Proceedings of ACM MobiCom*.
- [24] S. Shalunov, G. Hazel, J. Iyengar, and M. Kuehlewind. 2012. *Low Extra Delay Background Transport (LEDBAT)*. RFC 6817. RFC Editor. <http://www.rfc-editor.org/rfc/rfc6817.txt> <http://www.rfc-editor.org/rfc/rfc6817.txt>.
- [25] Keith Winstein, Anirudh Sivaraman, and Hari Balakrishnan. 2013. Stochastic Forecasts Achieve High Throughput and Low Delay over Cellular Networks. In *Proceedings of USENIX NSDI*.
- [26] H. Wu, X. Lin, X. Liu, K. Tan, and Y. Zhang. 2016. CoSchd: Coordinated Scheduling With Channel and Load Awareness for Alleviating Cellular Congestion. *IEEE/ACM Transactions on Networking* 24, 5 (October 2016), 2579–2592.
- [27] Xiufeng Xie, Xinyu Zhang, Swarun Kumar, and Li Erran Li. 2015. piStream: Physical Layer Informed Adaptive Video Streaming over LTE. In *Proceedings of ACM MobiCom*.
- [28] Xiufeng Xie, Xinyu Zhang, and Shilin Zhu. 2017. Accelerating Mobile Web Loading Using Cellular Link Information. In *Proceedings of ACM MobiSys*.
- [29] F. Xu, Y. Li, H. Wang, P. Zhang, and D. Jin. 2017. Understanding Mobile Traffic Patterns of Large Scale Cellular Towers in Urban Environment. *IEEE/ACM Transactions on Networking* 25, 2 (April 2017), 1147–1161.
- [30] Qiang Xu, Sanjeev Mehrotra, Zhuoqing Mao, and Jin Li. 2013. PROTEUS: Network Performance Forecast for Real-time, Interactive Mobile Applications. In *Proceedings of ACM MobiSys*.
- [31] C. Yue, R. Jin, K. Suh, Y. Qin, B. Wang, and W. Wei. 2017. LinkForecast: Cellular Link Bandwidth Prediction in LTE Networks. *IEEE Transactions on Mobile Computing* Preprint (2017).
- [32] Yasir Zaki, Thomas Pötsch, Jay Chen, Lakshminarayanan Subramanian, and Carmelita Görg. 2015. Adaptive Congestion Control for Unpredictable Cellular Networks. In *Proceedings of ACM SIGCOMM*.
- [33] Z. Zhou, M. Dong, K. Ota, G. Wang, and L. T. Yang. 2016. Energy-Efficient Resource Allocation for D2D Communications Underlying Cloud-RAN-Based LTE-A Networks. *IEEE Internet of Things* 3, 3 (June 2016), 428–438.