

Bibliography

- [1] J. Wilamowski, B.M. Irwin, “Industrial communication systems,” *CRC Press*, 2011.
- [2] S. A. Busari, K. M. S. Huq, S. Mumtaz, and J. Rodriguez, “Terahertz massive mimo for beyond-5g wireless communication,” in *ICC 2019 - 2019 IEEE International Conference on Communications (ICC)*, 2019, pp. 1–6.
- [3] E. Sisinni, A. Saifullah, S. Han, U. Jennehag, and M. Gidlund, “Industrial internet of things: Challenges, opportunities, and directions,” *IEEE Transactions on Industrial Informatics*, vol. 14, no. 11, pp. 4724–4734, 2018.
- [4] F. Nizzi, T. Pecorella, M. Bertini, R. Fantacci, M. Bastianini, C. Cerboni, A. Buzzigoli, M. Gattoni, and A. Fratini, “Evaluation of iot and videosurveillance applications in a 5g smart city: the italian 5g experimentation in prato,” in *2018 AEIT International Annual Conference*, 2018, pp. 1–6.
- [5] Z. Qin, D. Wu, Z. Xiao, B. Fu, and Z. Qin, “Modeling and analysis of data aggregation from convergecast in mobile sensor networks for industrial iot,” *IEEE Transactions on Industrial Informatics*, vol. 14, no. 10, pp. 4457–4467, 2018.
- [6] C. Kan, H. Yang, and S. Kumara, “Parallel computing and network analytics for fast industrial internet-of-things (iiot) machine information processing and condition monitoring,” *Journal of Manufacturing Systems*, vol. 46, pp. 282–293, 2018.
- [7] Y. Yu, R. Chen, H. Li, Y. Li, and A. Tian, “Toward data security in edge intelligent iiot,” *IEEE Network*, vol. 33, no. 5, pp. 20–26, 2019.
- [8] T. Hussain, K. Muhammad, J. D. Ser, S. W. Baik, and V. H. C. de Albuquerque, “Intelligent embedded vision for summarization of multiview videos in iiot,” *IEEE Transactions on Industrial Informatics*, vol. 16, no. 4, pp. 2592–2602, 2020.
- [9] X. Wang, L. T. Yang, Y. Wang, L. Ren, and M. J. Deen, “Adtt: A highly efficient distributed tensor-train decomposition method for iiot big data,” *IEEE Transactions on Industrial Informatics*, vol. 17, no. 3, pp. 1573–1582, 2021.

- [10] H.-L. Truong, “Integrated analytics for iiot predictive maintenance using iot big data cloud systems,” in *2018 IEEE International Conference on Industrial Internet (ICII)*, 2018, pp. 109–118.
- [11] M. Cakir, M. A. Guvenc, and S. Mistikoglu, “The experimental application of popular machine learning algorithms on predictive maintenance and the design of iiot based condition monitoring system,” *Computers Industrial Engineering*, vol. 151, p. 106948, 2021.
- [12] X. Yan, Y. Xu, X. Xing, B. Cui, Z. Guo, and T. Guo, “Trustworthy network anomaly detection based on an adaptive learning rate and momentum in iiot,” *IEEE Transactions on Industrial Informatics*, vol. 16, no. 9, pp. 6182–6192, 2020.
- [13] P. Eden, A. Blyth, K. Jones, H. Soulsby, P. Burnap, Y. Cherdantseva, and K. Stoddart, “Scada system forensic analysis within iiot,” in *Cybersecurity for Industry 4.0*. Springer, 2017, pp. 73–101.
- [14] F. Núñez, S. Langarica, P. Díaz, M. Torres, and J. C. Salas, “Neural network-based model predictive control of a paste thickener over an industrial internet platform,” *IEEE Transactions on Industrial Informatics*, vol. 16, no. 4, pp. 2859–2867, 2020.
- [15] Y. Li, M. Alizadeh, M. Yu, R. Miao, H. Liu, Y. Zhuang, F. Feng, L. Tang, Z. Cao, M. Zhang, and F. Kelly, “Hpcc: high precision congestion control,” 08 2019, pp. 44–58.
- [16] B. Valeske, A. Osman, F. Römer, and R. Tschuncky, “Next generation nde sensor systems as iiot elements of industry 4.0,” *Research in Nondestructive Evaluation*, vol. 31, no. 5-6, pp. 340–369, 2020.
- [17] S. Chen, Z. Wang, H. Zhang, G. Yang, and K. Wang, “Fog-based optimized kronecker-supported compression design for industrial iot,” *IEEE Transactions on Sustainable Computing*, vol. 5, no. 1, pp. 95–106, 2020.
- [18] K.-E. Åarzen, “A simple event-based pid controller,” *IFAC Proceedings Volumes*, vol. 32, no. 2, pp. 8687–8692, 1999, 14th IFAC World Congress 1999, Beijing, Chia, 5-9 July.
- [19] U. Premaratne, S. Warnakulasooriya, and R. Nandana, “Characterization of event based sampling encoders for iiot using input-output mutual information,” *IEEE Transactions on Industrial Informatics*, vol. 17, 09 2020.
- [20] M. Emara, H. Elsayy, and G. Bauch, “A spatiotemporal model for peak aoi in uplink iot networks: Time versus event-triggered traffic,” *IEEE Internet of Things Journal*, vol. 7, no. 8, pp. 6762–6777, 2020.

- [21] H. Rezaei, M. U. Chaudhry, H. Almasi, and B. Vamanan, “Icon: Incast congestion control using packet pacing in datacenter networks,” in *2019 11th International Conference on Communication Systems & Networks (COMSNETS)*. IEEE, 2019, pp. 125–132.
- [22] M. Gowtham and K. Subramaniam, “Congestion control and packet recovery for cross layer approach in manet,” *Cluster Computing*, vol. 22, no. 5, pp. 12 029–12 036, 2019.
- [23] U. Premaratne and U. S. Premarathne, “A sum of bernoulli sources approximation for packet switched network traffic in backbone links,” *IEEE Communications Letters*, vol. 24, no. 1, pp. 141–145, 2019.
- [24] F. Gebali, *Analysis of computer and communication networks*. Springer Science & Business Media, 2008.
- [25] D. R. Cox and V. Isham, *Point processes*. CRC Press, 1980, vol. 12.
- [26] V. S. Frost and B. Melamed, “Traffic modeling for telecommunications networks,” *IEEE Communications Magazine*, vol. 32, no. 3, pp. 70–81, 1994.
- [27] V. Frost and B. Melamed, “Traffic modeling for telecommunications networks,” *IEEE Communications Magazine*, vol. 32, no. 3, pp. 70–81, 1994.
- [28] A. Khintchine, “Mathematical methods in the theory of queueing,” *London 1960.*, p. 124, 1955.
- [29] F. Metzger, T. Hoffeld, A. Bauer, S. Kounev, and P. E. Heegaard, “Modeling of aggregated iot traffic and its application to an iot cloud,” *Proceedings of the IEEE*, vol. 107, no. 4, pp. 679–694, 2019.
- [30] A. Erramilli, M. Roughan, D. Veitch, and W. Willinger, “Self-similar traffic and network dynamics,” *Proceedings of the IEEE*, vol. 90, no. 5, pp. 800–819, 2002.
- [31] M. E. Crovella and A. Bestavros, “Self-similarity in world wide web traffic: Evidence and possible causes,” *IEEE/ACM Transactions on networking*, vol. 5, no. 6, pp. 835–846, 1997.
- [32] Z. Sahinoglu and S. Tekinay, “On multimedia networks: self-similar traffic and network performance,” *IEEE Communications Magazine*, vol. 37, no. 1, pp. 48–52, 1999.
- [33] A. Adas, “Traffic models in broadband networks,” *IEEE communications Magazine*, vol. 35, no. 7, pp. 82–89, 1997.
- [34] J. D. McCabe, *Practical computer network analysis and design*. Morgan Kaufmann Publishers Inc., 1997.

- [35] N. Yamanaka, Y. Sato, and K. Sato, "Performance limitation of the leaky bucket algorithm for atm networks," *IEEE Transactions on Communications*, vol. 43, no. 8, pp. 2298–2300, 1995.
- [36] D. Jurca and P. Frossard, "Video packet selection and scheduling for multipath streaming," *IEEE Transactions on Multimedia*, vol. 9, no. 3, pp. 629–641, 2007.
- [37] A. Bilami, M. Lalam, M. Daoui, and B. Djamah, "A cell selection policy for an input-buffered packet switch," *International Journal of Computers and Applications*, vol. 28, no. 3, pp. 234–242, 2006.
- [38] M. Ke, Y. Nenghai, and L. Bin, "A new packet dropping policy in delay tolerant network," in *2010 IEEE 12th International Conference on Communication Technology*. IEEE, 2010, pp. 377–380.
- [39] M. A. Labrador and S. Banerjee, "Packet dropping policies for atm and ip networks," *IEEE Communications Surveys*, vol. 2, no. 3, pp. 2–14, 1999.
- [40] M. J. Neely, "Intelligent packet dropping for optimal energy-delay tradeoffs in wireless downlinks," *IEEE Transactions on Automatic Control*, vol. 54, no. 3, pp. 565–579, 2009.
- [41] N. McKeown and T. Anderson, "A quantitative comparison of iterative scheduling algorithms for input-queued switches," *Computer Networks and ISDN Systems*, vol. 30, pp. 2133–2168, 1998.
- [42] G. B. Dantzig and M. N. Thapa, *Linear programming 1: introduction*. Springer Science & Business Media, 2006.
- [43] S. S. Rao, *Engineering optimization: theory and practice*. John Wiley & Sons, 2019.
- [44] A. Burns, *Preemptive priority based scheduling: An appropriate engineering approach*. University of York, Department of Computer Science, 1993.
- [45] J. A. Cobb, M. G. Gouda, and A. El-Nahas, "Time-shift scheduling-fair scheduling of flows in high-speed networks," *IEEE/ACM transactions on networking*, vol. 6, no. 3, pp. 274–285, 1998.
- [46] K. Nichols, S. Blake, F. Baker, and D. Black, "Definition of the differentiated services field (ds field) in the ipv4 and ipv6 headers," RFC 2474, 1998.
- [47] D. Stiliadis and A. Varma, "Latency-rate servers: a general model for analysis of traffic scheduling algorithms," *IEEE/ACM Transactions on networking*, vol. 6, no. 5, pp. 611–624, 1998.

- [48] A. K. Parekh and R. G. Gallager, “A generalized processor sharing approach to flow control in integrated services networks: the single-node case,” *IEEE/ACM transactions on networking*, vol. 1, no. 3, pp. 344–357, 1993.
- [49] A. Parekh and R. Gallager, “A generalized processor sharing approach to flow control in integrated services networks: the multiple node case,” *IEEE/ACM Transactions on Networking*, vol. 2, no. 2, pp. 137–150, 1994.
- [50] B. Grot, S. W. Keckler, and O. Mutlu, “Preemptive virtual clock: A flexible, efficient, and cost-effective qos scheme for networks-on-chip,” in *Proceedings of the 42nd Annual IEEE/ACM International Symposium on Microarchitecture*, 2009, pp. 268–279.
- [51] M. Katevenis, S. Sidiropoulos, and C. Courcoubetis, “Weighted round-robin cell multiplexing in a general-purpose atm switch chip,” *IEEE Journal on selected Areas in Communications*, vol. 9, no. 8, pp. 1265–1279, 1991.
- [52] D. Ferrari and D. C. Verma, “A scheme for real-time channel establishment in wide-area networks,” *IEEE journal on Selected Areas in communications*, vol. 8, no. 3, pp. 368–379, 1990.
- [53] M. Shreedhar and G. Varghese, “Efficient fair queuing using deficit round-robin,” *IEEE/ACM Transactions on networking*, vol. 4, no. 3, pp. 375–385, 1996.
- [54] D. C. Verma, H. Zhang, and D. Ferrari, *Delay jitter control for real-time communication in a packet switching network*. International Computer Science Institute, 1991.
- [55] V. M. Vokkarane, J. P. Jue, and S. Sitaraman, “Burst segmentation: an approach for reducing packet loss in optical burst switched networks,” in *2002 IEEE International Conference on Communications. Conference Proceedings. ICC 2002 (Cat. No. 02CH37333)*, vol. 5. IEEE, 2002, pp. 2673–2677.
- [56] L. Zhang, “Virtualclock: A new traffic control algorithm for packet-switched networks,” *ACM Transactions on Computer Systems (TOCS)*, vol. 9, no. 2, pp. 101–124, 1991.
- [57] M. E. G. Mustafa, S. A. Talab *et al.*, “The effect of queuing mechanisms first in first out (fifo), priority queuing (pq) and weighted fair queuing (wfq) on network’s routers and applications,” *Wireless Sensor Network*, vol. 8, no. 05, p. 77, 2016.
- [58] F. Lu, G. M. Voelker, and A. C. Snoeren, “Weighted fair queuing with differential dropping,” in *2012 Proceedings IEEE INFOCOM*. IEEE, 2012, pp. 2981–2985.

- [59] C. Kim, T.-W. Yoo, and B.-T. Kim, “A hierarchical weighted round robin epon dba scheme and its comparison with cyclic water-filling algorithm,” in *2007 IEEE International Conference on Communications*. IEEE, 2007, pp. 2156–2161.
- [60] D.-s. Back, K. Pyun, S.-M. Lee, J. Cho, and N. Kim, “A hierarchical deficit round-robin scheduling algorithm for a high level of fair service,” in *2007 International Symposium on Information Technology Convergence (ISITC 2007)*, 2007, pp. 115–119.
- [61] A. Kortebi, S. Oueslati, and J. Roberts, “Implicit service differentiation using deficit round robin,” *ITC19*, 2005.
- [62] M. Shreedhar and G. Varghese, “Efficient fair queueing using deficit round robin,” in *Proceedings of the conference on Applications, technologies, architectures, and protocols for computer communication*, 1995, pp. 231–242.
- [63] H. Zhang and D. Ferrari, “Rate-controlled static-priority queueing,” in *IEEE INFOCOM’93 The Conference on Computer Communications, Proceedings*. IEEE, 1993, pp. 227–236.
- [64] C. Aras, J. Kurose, D. Reeves, and H. Schulzrinne, “Real-time communication in packet-switched networks,” *Proceedings of the IEEE*, vol. 82, no. 1, pp. 122–139, 1994.
- [65] S.-L. Tsao, “Extending earliest-due-date scheduling algorithms for wireless networks with location-dependent errors,” in *Vehicular Technology Conference Fall 2000. IEEE VTS Fall VTC2000. 52nd Vehicular Technology Conference (Cat. No. 00CH37152)*, vol. 1. IEEE, 2000, pp. 223–228.
- [66] K.-H. Teh, P.-Y. Kong, and S. Jiang, “Proactive earliest due-date scheduling in wireless packet networks,” in *International Conference on Communication Technology Proceedings, 2003. ICCT 2003.*, vol. 2. IEEE, 2003, pp. 816–820.
- [67] S. Han and K. G. Shin, “Fast restoration of real-time communication service from component failures in multi-hop networks,” in *Proceedings of the ACM SIGCOMM’97 conference on Applications, technologies, architectures, and protocols for computer communication*, 1997, pp. 77–88.
- [68] A. C. Sembiring, J. Tampubolon, D. Sitanggang, M. Turnip *et al.*, “Improvement of inventory system using first in first out (fifo) method,” in *Journal of Physics: Conference Series*, vol. 1361, no. 1. IOP Publishing, 2019, p. 012070.
- [69] R. Guérin and V. Peris, “Quality-of-service in packet networks: basic mechanisms and directions,” *Computer networks*, vol. 31, no. 3, pp. 169–189, 1999.

- [70] Z. Lotker and B. Patt-Shamir, “Nearly optimal fifo buffer management for diffserv,” in *Proceedings of the twenty-first annual symposium on Principles of distributed computing*, 2002, pp. 134–143.
- [71] M. Christiansen, K. Jeffay, D. Ott, and F. D. Smith, “Tuning red for web traffic,” *ACM SIGCOMM Computer Communication Review*, vol. 30, no. 4, pp. 139–150, 2000.
- [72] L. Bic and A. C. Shaw, *The logical design of operating systems*. Prentice-Hall, Inc., 1988.
- [73] J. S. Gero and T. Mc Neill, “An approach to the analysis of design protocols,” *Design studies*, vol. 19, no. 1, pp. 21–61, 1998.
- [74] R. V. Rasmussen and M. A. Trick, “Round robin scheduling—a survey,” *European Journal of Operational Research*, vol. 188, no. 3, pp. 617–636, 2008.
- [75] E. L. Hahne, “Round-robin scheduling for max-min fairness in data networks,” *IEEE Journal on Selected Areas in communications*, vol. 9, no. 7, pp. 1024–1039, 1991.
- [76] S. Ramesh and S. K. Kasera, “Best effort session-level congestion control,” in *2007 IEEE International Conference on Network Protocols*. IEEE, 2007, pp. 236–245.
- [77] V. B. Iversen, *Teletraffic engineering and network planning*. DTU Fotonik, 2015.
- [78] N. Nikaein, M. Laner, K. Zhou, P. Svoboda, D. Drajić, M. Popovic, and S. Krco, “Simple traffic modeling framework for machine type communication,” in *ISWCS 2013; The Tenth International Symposium on Wireless Communication Systems*, 2013, pp. 1–5.
- [79] M. Laner, N. Nikaein, P. Svoboda, M. Popovic, D. Drajić, and S. Krco, “Traffic models for machine-to-machine (m2m) communications: types and applications,” in *Machine-to-machine (M2M) Communications*. Elsevier, 2015, pp. 133–154.
- [80] P. S. I. Petizn and A. Nogueira, “Characterization and modeling of m2m video surveillance traffic.” IARIA Int., 2012, pp. 65–70.
- [81] R. H. Khan and J. Y. Khan, “A comprehensive review of the application characteristics and traffic requirements of a smart grid communications network,” *Computer Networks*, vol. 57, no. 3, pp. 825–845, 2013.
- [82] W. Dargie and C. Poellabauer, *Fundamentals of wireless sensor networks: theory and practice*. John Wiley & Sons, 2010.

- [83] J. Mocnej, A. Pekar, W. K. Seah, P. Papcun, E. Kajati, D. Cupkova, J. Koziorek, and I. Zolotova, “Quality-enabled decentralized iot architecture with efficient resources utilization,” *Robotics and Computer-Integrated Manufacturing*, vol. 67, p. 102001, 2021.
- [84] M. Bocca, O. Kaltiokallio, and N. Patwari, “Radio tomographic imaging for ambient assisted living,” in *International Competition on Evaluating AAL Systems through Competitive Benchmarking*. Springer, 2012, pp. 108–130.
- [85] G. Pabbisetty and H. Mori, “A simple decentralized timeslot synchronization algorithm for large-scale wireless iot networks,” in *2021 16th Annual Conference on Wireless On-demand Network Systems and Services Conference (WONS)*. IEEE, 2021, pp. 1–4.
- [86] K. D. Colling, P. R. Carpenter, L. Koleszar, and P. E. Schmidt, “Distributed ad hoc network protocol using synchronous shared beacon signaling,” Feb. 26 2013, uS Patent 8,385,322.
- [87] H.-J. Byun and J.-T. Lim, “On a fair congestion control scheme for *TCP* vegas,” *IEEE Communications Letters*, vol. 9, no. 2, pp. 190–192, 2005.
- [88] S. Ha, I. Rhee, and L. Xu, “Cubic: a new *TCP*-friendly high-speed *TCP* variant,” *ACM SIGOPS operating systems review*, vol. 42, no. 5, pp. 64–74, 2008.
- [89] J. Wang, J. Wen, Y. Han, J. Zhang, C. Li, and Z. Xiong, “Cubic-fit: A high performance and *TCP* cubic friendly congestion control algorithm,” *IEEE Communications Letters*, vol. 17, no. 8, pp. 1664–1667, 2013.
- [90] J. Wang, J. Wen, J. Zhang, and Y. Han, “*TCP*-fit: An improved *TCP* congestion control algorithm and its performance,” in *2011 Proceedings IEEE INFOCOM*. IEEE, 2011, pp. 2894–2902.