Bibliography

[1] Abraham, I., Dolev, D., and Halpern, J. Y. (2013). Distributed protocols for leader election: A game-theoretic perspective. In *International Symposium on Distributed Computing*, pages 61–75. Springer.

[2] Abraham, I., Dolev, D., and Halpern, J. Y. (2019). Distributed protocols for leader election: A game-theoretic perspective. *ACM Transactions on Economics and Computation (TEAC)*, 7(1):4.

[3] Abu-Amara, H. H. (1988). Fault-tolerant distributed algorithm for election in complete networks. *IEEE Transactions on computers*, 37(4):449–453.

[4] Aguilera, M. K., Chen, W., and Toueg, S. (1997). Heartbeat: A timeout-free failure detector for quiescent reliable communication. In *International Workshop on Distributed Algorithms*, pages 126–140. Springer.

[5] Aguilera, M. K., Chen, W., and Toueg, S. (1999). Using the heartbeat failure detector for quiescent reliable communication and consensus in partitionable networks. *Theoretical Computer Science*, 220(1):3–30.

[6] Al Refai, M. (2006). A new leader election algorithm in hypercube networks. In *Symposium Proceedings Volume II Computer Science & Engineering and Electrical & Electronics Engineering, European University of Lefke, North Cyprus*.

[7] Al Refai, M. (2011). Leader election algorithm in hypercube netwok when the id number is not distinguished. *Information & Communication Systems*, pages 229–237.

[8] Al Refai, M. (2014). Dynamic leader election algorithm in 2d torus network with multi links failure. *IJCST*, 2(5):150–156.

[9] Al Shehri, W. (2013). Cloud database database as a service. *International Journal of Database Management Systems*, 5(2):1.

[10] Altisen, K., Datta, A. K., Devismes, S., Durand, A., and Larmore, L. L. (2016). Leader election in rings with bounded multiplicity (short paper). In *International Symposium on Stabilization, Safety, and Security of Distributed Systems*, pages 1–6. Springer.

[11] Antonoiu, G. and Srimani, P. K. (1996). A self-stabilizing leader election algorithm for tree graphs. *Journal of Parallel and Distributed Computing*, 34(2):227–232.

[12] Attiya, H. and Welch, J. (2004). *Distributed computing: fundamentals, simulations, and advanced topics*, volume 19. John Wiley & Sons.

[13] Babaoglu, O. and Marzullo, K. (1993). Consistent global states of distributed systems: Fundamental concepts and mechanisms. *Distributed Systems*, 53.

[14] Balakrishnan, N. (2007). The weibull analysis handbook. *Journal of Quality Technology*, 39(1):85.

[15] Behera, M. R., Upadhyay, S., Otter, R., and Shetty, S. (2021). Federated learning using peer-to-peer network for decentralized orchestration of model weights.

[16] Bharadwaj, V., Ghose, D., Mani, V., and Robertazzi, T. G. (1996). *Scheduling divisible loads in parallel and distributed systems*, volume 8. John Wiley & Sons.

[17] Birkur, S. K. (2012). *Link Failure Detector and Simulation of Metrics in Distributed Network*. PhD thesis, Texas A&M University-Corpus Christi.

[18] Birman, K. P., van Renesse, R., et al. (1994). *Reliable distributed computing with the Isis toolkit*, volume 85. IEEE Computer society press Los Alamitos.

[19] Biswas, A. and Dutta, A. (2016). A timer based leader election algorithm. In *Ubiquitous Intelligence & Computing, Advanced and Trusted Computing, Scalable Computing and Communications, Cloud and Big Data Computing, Internet of People, and Smart World Congress (UIC/ATC/ScalCom/CBDCom/IoP/SmartWorld), 2016 Intl IEEE Conferences*, pages 432–439. IEEE.

[20] Biswas, T., Bhardwaj, R., Ray, A. K., and Kuila, P. (2018). A novel leader election algorithm based on resources for ring networks. *International Journal of Communication Systems*, 31(10):e3583.

[21] Blin, L. and Tixeuil, S. (2018). Compact self-stabilizing leader election for general networks. In *Latin American Symposium on Theoretical Informatics*, pages 161–173. Springer.

[22] Breitbart, Y. and Korth, H. F. (1999). Replication and consistency in a distributed environment. *Journal of Computer and System Sciences*, 59(1):29–69.

[23] Burns, J. E. (1980). A formal model for message-passing systems. *Technical Report 91*.

[24] Cachin, C., Guerraoui, R., and Rodrigues, L. (2011). *Introduction to reliable and secure distributed programming*. Springer Science & Business Media.

[25] Camara, J. M., Moreto, M., Vallejo, E., Beivide, R., Miguel-Alonso, J., Martinez, C., and Navaridas, J. (2010). Twisted torus topologies for enhanced interconnection networks. *IEEE Transactions on Parallel and Distributed Systems*, 21(12):1765–1778.

[26] Chandra, T. D., Hadzilacos, V., and Toueg, S. (1996). The weakest failure detector for solving consensus. *Journal of the ACM (JACM)*, 43(4):685–722.

[27] Chandra, T. D. and Toueg, S. (1996). Unreliable failure detectors for reliable distributed systems. *Journal of the ACM (JACM)*, 43(2):225–267.

[28] Chang, E. and Roberts, R. (1979). An improved algorithm for decentralized extrema-finding in circular configurations of processes. *Communications of the ACM*, 22(5):281–283.

[29] Chatterjee, S., Pandurangan, G., and Robinson, P. (2019). The complexity of leader election in diameter-two networks. *Distributed Computing*, pages 1–17.

[30] Chen, H.-P. and Chen, H.-L. (2019). Self-stabilizing leader election. In *Proceedings of the 2019 ACM Symposium on Principles of Distributed Computing*, pages 53–59.

[31] Choudhary, P., Dwivedi, R. K., and Singh, U. (2020). Novel algorithm for leader election process in virtual traffic light protocol. *International Journal of Information Technology*, 12(1):113–117.

[32] Corbett, J. C., Dean, J., Epstein, M., Fikes, A., Frost, C., Furman, J. J., Ghemawat, S., Gubarev, A., Heiser, C., Hochschild, P., et al. (2013). Spanner: Google's globally distributed database. *ACM Transactions on Computer Systems (TOCS)*, 31(3):1–22.

[33] Cormen, T. H., Leiserson, C. E., Rivest, R. L., and Stein, C. (2009). *Introduction to algorithms*. MIT press.

[34] Cristian, F. (1995). *Synchronous and Asynchronous Group Communication*. Department of Computer Science and Engineering, University of California . . . .

[35] Dagdeviren, O. and Erciyes, K. (2008). A hierarchical leader election protocol for mobile ad hoc networks. In *International Conference on Computational Science*, pages 509–518. Springer.

[36] DeCleene, B., Dondeti, L., Griffin, S., Hardjono, T., Kiwior, D., Kurose, J., Towsley, D., Vasudevan, S., and Zhang, C. (2001). Secure group communications for wireless networks. In *2001 MILCOM Proceedings Communications for Network-Centric Operations: Creating the Information Force (Cat. No. 01CH37277)*, volume 1, pages 113–117. IEEE.

[37] Derhab, A. and Badache, N. (2008). A self-stabilizing leader election algorithm in highly dynamic ad hoc mobile networks. *IEEE Transactions on Parallel and Distributed Systems*, 19(7):926–939.

[38] Dolev, S., Israeli, A., and Moran, S. (1997). Uniform dynamic self-stabilizing leader election. *IEEE Transactions on Parallel and Distributed Systems*, 8(4):424–440.

[39] Dorri, A., Kanhere, S. S., and Jurdak, R. (2018). Multi-agent systems: A survey. *Ieee Access*, 6:28573–28593.

[40] Emek, Y., Kutten, S., Lavi, R., and Moses Jr, W. K. (2019). Deterministic leader election in programmable matter. *arXiv preprint arXiv:1905.00580*.

[41] Essinger, S., Zhu, X., Schnee, M., Liu, J., Shen, X., Chen, L., and Lu, J. (2013). Wireless dual-function network device dynamically switching and reconfiguring from a wireless network router state of operation into a wireless network coordinator state of operation in a wireless communication network. US Patent 8,457,013.

[42] Fich, F. and Ruppert, E. (2000). Lower bounds in distributed computing. In *International Symposium on Distributed Computing*, pages 1–28. Springer.

[43] Finkelstein, M. (2008). *Failure rate modelling for reliability and risk.* Springer Science & Business Media.

[44] Fischer, M. J., Lynch, N. A., and Paterson, M. S. (1985). Impossibility of distributed consensus with one faulty process. *Journal of the ACM (JACM)*, 32(2):374–382.

[45] Foster, I. and Iamnitchi, A. (2003). On death, taxes, and the convergence of peer-to-peer and grid computing. In *International Workshop on Peer-To-Peer Systems*, pages 118–128. Springer.

[46] Frederickson, G. N. and Lynch, N. A. (1987). Electing a leader in a synchronous ring. *Journal of the ACM (JACM)*, 34(1):98–115.

[47] Fujimoto, R. M. (2000). *Parallel and distributed simulation systems*, volume 300. Wiley New York.

[48] Fussell, J. (1975). How to hand-calculate system reliability and safety characteristics. *IEEE Transactions on Reliability*, 24(3):169–174.

[49] Gallager, R. G., Humblet, P. A., and Spira, P. M. (1983). A distributed algorithm for minimum-weight spanning trees. *ACM Transactions on Programming Languages and systems (TOPLAS)*, 5(1):66–77.

[50] Garcia-Molina, H. (1982). Elections in a distributed computing system. *IEEE transactions on Computers*, 31(1):48–59.

[51] Gilbert, S., Robinson, P., and Sourav, S. (2018). Leader election in well-connected graphs. In *Proceedings of the 2018 ACM Symposium on Principles of Distributed Computing*, pages 227–236.

[52] Golbeck, J. (2015). *Introduction to social media investigation: a hands-on approach.* Syngress.

[53] Gusella, R. and Zatti, S. (1989). The accuracy of the clock synchronization achieved by tempo in berkeley unix 4.3 bsd. *IEEE transactions on Software Engineering*, 15(7):847–853.

[54] Hadzilacos, V. (1990). On the relationship between the atomic commitment and consensus problems. In *Fault-Tolerant Distributed Computing*, pages 201–208. Springer.

[55] Hadzilacos, V. and Toueg, S. (1993). Fault-tolerant broadcasts and related problems. In *Distributed systems (2nd Ed.)*, pages 97–145.

[56] Hammack, R. H. (2013). *Book of proof.* Richard Hammack.

[57] Hatzis, K. P., Pentaris, G. P., Spirakis, P. G., Tampakas, V. T., and Tan, R. B. (1999). Fundamental control algorithms in mobile networks. In *Proceedings of the eleventh annual ACM symposium on Parallel algorithms and architectures*, pages 251–260.

[58] Herrera, F., Martinez, L., and Sanchez, P. J. (2005). Managing non-homogeneous information in group decision making. *European Journal of Operational Research*, 166(1):115–132.

[59] Hirschberg, D. S. and Sinclair, J. B. (1980). Decentralized extrema-finding in circular configurations of processors. *Communications of the ACM*, 23(11):627–628.

[60] Ishigaki, G., Gour, R., Yousefpour, A., Shinomiya, N., and Jue, J. P. (2017). Cluster leader election problem for distributed controller placement in sdn. In *GLOBECOM 2017-2017 IEEE Global Communications Conference*, pages 1–6. IEEE.

[61] Jiménez, E., Arévalo, S., Herrera, C., and Tang, J. (2015). Eventual election of multiple leaders for solving consensus in anonymous systems. *The Journal of Supercomputing*, 71(10):3726–3743.

[62] Kadjouh, N., Bounceur, A., Bezoui, M., Khanouche, M. E., Euler, R., Hammoudeh, M., Lagadec, L., Jabbar, S., and Al-Turjman, F. (2020). A dominating tree based leader

election algorithm for smart cities iot infrastructure. *Mobile Networks and Applications*, pages 1–14.

[63] Kindler, E. (1994). Safety and liveness properties: A survey. *Bulletin of the European Association for Theoretical Computer Science*, 53(268-272):30.

[64] Kordafshari, M., Gholipour, M., Mosakhani, M., Haghighat, A., and Dehghan, M. (2005). Modified bully election algorithm in distributed systems. *WSEAS Transactions on Information Science and Applications*, 2(8):1189–1194.

[65] Korsh, J. F. (1994). Loopless generation of k-ary tree sequences. *Information processing letters*, 52(5):243–247.

[66] Krnc, M., Sereni, J.-S., Škrekovski, R., and Yilma, Z. B. (2018). Eccentricity of networks with structural constraints. *Discussiones Mathematicae Graph Theory*.

[67] Kshemkalyani, A. D. and Singhal, M. (2011). *Distributed computing: principles, algorithms, and systems*. Cambridge University Press.

[68] Kutten, S., Moses Jr, W. K., Pandurangan, G., and Peleg, D. (2020). Singularly optimal randomized leader election. *arXiv preprint arXiv:2008.02782*.

[69] Lamport, L. (1977). Proving the correctness of multiprocess programs. *IEEE transactions on software engineering*, (2):125–143.

[70] Lamport, L., Shostak, R., and Pease, M. (2019). The byzantine generals problem. In *Concurrency: the Works of Leslie Lamport*, pages 203–226.

[71] Lampson, B. W. (1982). *Distributed Systems: Architecture and Implementation*. Springer-Verlag New York, Inc.

[72] Larrea, M., Arévalo, S., and Fernndez, A. (1999). Efficient algorithms to implement unreliable failure detectors in partially synchronous systems. In *International Symposium on Distributed Computing*, pages 34–49. Springer.

[73] Larrea, M., Fernández, A., and Arévalo, S. (2000). Optimal implementation of the weakest failure detector for solving consensus. In *Proceedings 19th IEEE Symposium on Reliable Distributed Systems SRDS-2000*, pages 52–59. IEEE.

[74] Larrea, M., Fernández, A., and Arévalo, S. (2004). On the implementation of unreliable failure detectors in partially synchronous systems. *IEEE Transactions on Computers*, 53(7):815–828.

[75] Le Lann, G. (1977). Distributed systems-towards a formal approach. In *IFIP congress*, volume 7, pages 155–160. Toronto.

[76] Li, F.-f., Yu, X.-z., and Wu, G. (2009). Design and implementation of high availability distributed system based on multi-level heartbeat protocol. In *2009 IITA International Conference on Control, Automation and Systems Engineering (case 2009)*, pages 83–87. IEEE.

[77] Loui, M. C. (1984). The complexity of sorting on distributed systems. *Information and Control*, 60(1-3):70–85.

[78] Lynch, N. A. (1996). *Distributed algorithms*. Elsevier.

[79] Malpani, N., Welch, J. L., and Vaidya, N. (2000). Leader election algorithms for mobile ad hoc networks. In *Proceedings of the 4th international workshop on Discrete algorithms and methods for mobile computing and communications*, pages 96–103. ACM.

[80] Marculescu, D., Albonesi, D., Buyuktosunoglu, A., and Bose, P. (2003). Partially asynchronous microprocessors (pams). *ISCA 2003 Tutorial*.

[81] Mashreghi, A. and King, V. (2018). Broadcast and minimum spanning tree with $o(m)$ messages in the asynchronous congest model. *arXiv preprint arXiv:1806.04328*.

[82] Maurya, A. K. and Tripathi, A. K. (2018). On benchmarking task scheduling algorithms for heterogeneous computing systems. *The Journal of Supercomputing*, 74(7):3039–3070.

[83] Meling, H. (2007). A framework for experimental validation and performance evaluation in fault tolerant distributed system. In *Parallel and Distributed Processing Symposium, 2007. IPDPS 2007. IEEE International*, pages 1–8. IEEE.

[84] Modarres, M., Kaminskiy, M. P., and Krivtsov, V. (2016). *Reliability engineering and risk analysis: a practical guide*. CRC press.

[85] Mohammad, Q., Alamoush, A., Basem, S., Al Assaf, M. M., and Daoud, M. S. (2015). Embedding bus and ring into hex-cell interconnection network. *International Journal of Computer Networks & Communications (IJCNC)*, 7(3):47–58.

[86] Owicki, S. and Lamport, L. (1982). Proving liveness properties of concurrent programs. *ACM Transactions on Programming Languages and Systems (TOPLAS)*, 4(3):455–495.

[87] Özsu, M. T. and Valduriez, P. (1999). *Principles of distributed database systems*, volume 2. Springer.

[88] Park, S., Yoo, S., and Kim, B. (2018). An election protocol based on group membership detection algorithm in mobile ad hoc distributed systems. *The Journal of Supercomputing*, 74(5):2239–2253.

[89] Perkins, C. E. and Royer, E. M. (1999). Ad-hoc on-demand distance vector routing. In *Proceedings WMCSA'99. Second IEEE Workshop on Mobile Computing Systems and Applications*, pages 90–100. IEEE.

[90] Raychoudhury, V., Cao, J., Niyogi, R., Wu, W., and Lai, Y. (2014). Top k-leader election in mobile ad hoc networks. *Pervasive and mobile computing*, 13:181–202.

[91] Raynal, M. (2013). *Distributed algorithms for message-passing systems*, volume 500. Springer.

[92] Razborov, A. A. (2011). Communication complexity. In Dierk Schleicher, M. L., editor, *An Invitation to Mathematics*, pages 97–117. Springer, Berlin, Heidelberg.

[93] Refai, M. (2015). Leader election algorithms in torus and hypercube networks comparisons and survey. *International Journal of Computer Science and Mobile Computing (IJCSMC)*, 4(1):102–111.

[94] Refai, M., Sharieh, A., and Alshammari, F. (2010). Leader election algorithm in 2d torus networks with the presence of one link failure. *Int. Arab J. Inf. Technol.*, 7(2):105–114.

[95] Rinne, H. (2008). *The Weibull distribution: a handbook*. Chapman and Hall/CRC.

[96] Roberts, L. (1988). The arpanet and computer networks. In *A history of personal workstations*, pages 141–172.

[97] Roubens, M. (1993). Some properties of choice functions based on valued binary relations. In *Readings in Fuzzy Sets for Intelligent Systems*, pages 738–750. Elsevier.

[98] Roubens, M. (1997). Fuzzy sets and decision analysis. *Fuzzy sets and systems*, 90(2):199–206.

[99] Santoro, N. (1984). On the message complexity of distributed problems. *International journal of computer & information sciences*, 13(3):131–147.

[100] Santoro, N. (2006). *Design and analysis of distributed algorithms*, volume 56. John Wiley & Sons.

[101] Sedgewick, R. and Wayne, K. (2011). *Algorithms*. Addison-Wesley Professional.

[102] Sidik, B., Puzis, R., Zilberman, P., and Elovici, Y. (2019). Pale: Time bounded practical agile leader election. *IEEE Transactions on Parallel and Distributed Systems*, 31(2):470–485.

[103] Singh, G. (1996). Leader election in the presence of link failures. *IEEE Transactions on Parallel and Distributed Systems*, 7(3):231–236.

[104] Singh, S. and Kurose, J. F. (1994). Electing" good" leaders. *Journal of Parallel and Distributed Computing*, 21(2):184–201.

[105] Sudo, Y., Ooshita, F., Izumi, T., Kakugawa, H., and Masuzawa, T. (2020). Time-optimal leader election in population protocols. *IEEE Transactions on Parallel and Distributed Systems*, 31(11):2620–2632.

[106] Sudo, Y., Ooshita, F., Kakugawa, H., Masuzawa, T., Datta, A. K., and Larmore, L. L. (2018). Loosely-stabilizing leader election for arbitrary graphs in population protocol model. *IEEE Transactions on Parallel and Distributed Systems*, 30(6):1359–1373.

[107] Sung, N., Kim, M., Jo, H., Yang, Y., Kim, J., Lausen, L., Kim, Y., Lee, G., Kwak, D., Ha, J.-W., et al. (2017). Nsml: A machine learning platform that enables you to focus on your models. *arXiv preprint arXiv:1712.05902*.

[108] Tanenbaum, A. S. and Van Steen, M. (2007). *Distributed systems: principles and paradigms.* Prentice-Hall.

[109] Tseng, P., Bertsekas, D. P., and Tsitsiklis, J. N. (1990). Partially asynchronous, parallel algorithms for network flow and other problems. *SIAM Journal on Control and Optimization*, 28(3):678–710.

[110] Tzeng, G.-H. and Huang, J.-J. (2011). *Multiple attribute decision making: methods and applications.* CRC press.

[111] Ulug, M. E. (1988). Method and apparatus for maintaining a dynamic logical ring in a token passing lan. US Patent 4,745,598.

[112] Vafaei, N., Ribeiro, R. A., and Camarinha-Matos, L. M. (2016). Normalization techniques for multi-criteria decision making: analytical hierarchy process case study. In *doctoral conference on computing, electrical and industrial systems*, pages 261–269. Springer.

[113] van Baronaigien, D. R. (2000). Loop free generation of k-ary trees. *American Journal of Mathematical and Management Sciences*, 20(1-2):183–200.

[114] Vasudevan, S., Kurose, J., and Towsley, D. (2004). Design and analysis of a leader election algorithm for mobile ad hoc networks. In *Proceedings of the 12th IEEE International Conference on Network Protocols, 2004. ICNP 2004.*, pages 350–360. IEEE.

[115] Verbraeken, J., Wolting, M., Katzy, J., Kloppenburg, J., Verbelen, T., and Rellermeyer, J. S. (2020). A survey on distributed machine learning. *ACM Computing Surveys (CSUR)*, 53(2):1–33.

[116] Villadangos, J., Cordoba, A., Fariña, F., and Prieto, M. (2005). Efficient leader election in complete networks. In *Parallel, Distributed and Network-Based Processing, 2005. PDP 2005. 13th Euromicro Conference on*, pages 136–143. IEEE.

[117] Von Martial, F. (1992a). *Coordinating plans of autonomous agents*, volume 2. Springer.

[118] Von Martial, F. (1992b). *Introduction.* Springer.

[119] Yager, R. R. (1988). On ordered weighted averaging aggregation operators in multicriteria decisionmaking. *IEEE Transactions on systems, Man, and Cybernetics*, 18(1):183–190.

[120] Yifrach, A. and Mansour, Y. (2018). Fair leader election for rational agents in asynchronous rings and networks. In *Proceedings of the 2018 ACM Symposium on Principles of Distributed Computing*, pages 217–226. ACM.

[121] Yoon, K. P. and Hwang, C.-L. (1995). *Multiple attribute decision making: an introduction*. Sage publications.

[122] Yu, K., Gao, M., Jiang, H., and Li, G. (2017). Multi-leader election in dynamic sensor networks. *EURASIP Journal on Wireless Communications and Networking*, 2017(1):187–200.

[123] Zomaya, A. Y. et al. (1996). *Parallel and distributed computing handbook*. McGraw-Hill New York.