

Supplementary Reading List

1 Other general distributed algorithms textbooks

- [1] Hagit Attiya and Jennifer Welch. *Distributed Computing: Fundamentals, Simulations, and Advanced Topics*. John Wiley and Sons, Inc., 2004. Second Edition.

2 The number of rounds required for consensus

- [1] Marcos Kawazoe Aguilera and Sam Toueg. A simple bivalency proof that t -resilient consensus requires $t + 1$ rounds. *Information Processing Letters*, 71(3-4):155-158, August 1999.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/IPL-AguileraToueg.pdf>.
- [2] Idit Keidar and Sergio Rajsbaum. On the cost of fault-tolerant consensus when there are no faults -a tutorial. Technical Report MIT-LCS-TR-821, May 2001. Preliminary version in *SIGACT News*, 32(2):45-63, Distributed Computing column, June 2001 (published in May 15th).
<http://theory.lcs.mit.edu/classes/6.852/05/papers/TR821.ps>.

3 Minimum spanning tree protocol

- [1] R. G. Gallager, P. A. Humblet, and P. M. Spira. A distributed algorithm for minimum-weight spanning trees. *ACM Trans. Programming Language Syst.*, vol. 5, pp. 66-77, 1983.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/p66-gallager.pdf>.

4 Vector timestamps

- [1] Friedemann Mattern. Virtual time and global states of distributed systems. In Michel Cosnard et al., editors, *Parallel and Distributed Algorithms: Proceedings of the International Workshop on Parallel and Distributed Algorithms* (Chateau de Bonas, Gers, France, October, 1988), pages 215-226. North Holland, 1989. (Reprinted in: Z. Yang, T.A. Marsland (Eds.), "Global States and Time in Distributed Systems", IEEE, 1994, pp. 123-133.)
<http://theory.lcs.mit.edu/classes/6.852/05/papers/VirtTimeGlobStatesFull.pdf>.
- [2] Colin Fidge. Logical time in distributed computing systems. *IEEE Computer*, 24(8):28-33, August 1991.
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5 Impossibility of consensus

- [1] Michael J. Fischer, Nancy A. Lynch, and Michael S. Paterson. Impossibility of Distributed Consensus with One Faulty Process. *Journal of the ACM*, 32(2):374-382, April 1985.
<http://theory.lcs.mit.edu/tds/papers/Lynch/jacm85.pdf>.

- [2] Soma Chaudhuri. More *Choices* Allow More *Faults*: Set Consensus Problems in Totally Asynchronous Systems. *Information and Computation* 105 (1), pp. 132-158, July 1993.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/Chaudhuri.pdf>.

6 Wait-free computability and the wait-free consensus hierarchy

- [1] Maurice Herlihy. Wait-free synchronization. *ACM Transactions on Programming Languages and Systems*, 13(1):124-149, January 1991.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/p124-herlihy.pdf>.
- [2] Prasad Jayanti. Robust wait-free hierarchies. *Journal of the ACM*, 44(4): 592-614, 1997.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/p592-jayanti.pdf>.
- [3] Prasad Jayanti. Wait-free computing. In Jean-Michel H elary, Michel Raynal (Eds.): *Distributed Algorithms, 9th International Workshop, WDAG '95, Le Mont-Saint-Michel, France, September 13-15, 1995, (Proceedings)*, volume 972 of *Lecture Notes in Computer Science*, Springer 1995.
Online version not available.
- [4] Wai-Kau Lo and Vassos Hadzilacos. All of us are smarter than any of us: nondeterministic wait-free hierarchies are not robust. *SIAM Journal on Computing*, 30(3):689-728, 2001.
<http://theory.lcs.mit.edu/classes/6.852/05/papers/p689-lo.ps>.

7 Wait-free vs. f -fault-tolerant data objects

- [1] T.D. Chandra, V. Hadzilacos, P. Jayanti and S. Toueg. Wait-freedom vs. t -resiliency and the robustness of the h_m^r hierarchy. *Proceedings of the 13th ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing*, pages 334-343, Los Angeles, CA, August 1994.
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8 Reliable broadcast

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9 Failure detectors and consensus

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- [4] L. Lamport. The part-time parliament. *ACM Transactions on Computer Systems*, 16(2):133–169, May 1998. Also Research Report 49, Digital Equipment Corporation Systems Research Center, Palo Alto, CA, September 1989.
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10 Self-stabilization

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11 Clock synchronization

- [1] Hagit Attiya and Jennifer Welch. *Distributed Computing: Fundamentals, Simulations, and Advanced Topics*. John Wiley and Sons, Inc., 2004. Second Edition.
- [2] Rui Fan and Nancy Lynch. Gradient Clock Synchronization. *Proceedings of the Twenty-third Annual ACM PODC*. St. Johns, Newfoundland, Canada, July 2004.
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12 Dynamic distributed algorithms

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