

ECE 753: Fault-Tolerant Computing

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READING LIST

- [aviz:95] A. Avizienis, “Building dependable systems: How to keep up with complexity”, *Twenty-Fifth Fault-Tolerant Computing Symposium Special Issue*, pp. 4–14, June 1995.
- [siew:95] D. P. Siewiorek, “Niche successes to ubiquitous invisibility: Fault-tolerant computing past, present and future”, *Twenty-Fifth Fault-Tolerant Computing Symposium Special Issue*, pp. 26–33, June 1995.
- [cris:91] F. Cristian, “Understanding fault-tolerant distributed systems”, *Communications of the ACM*, vol. 34, no. 2, , February 1991.
- [abra:86] J. A. Abraham and W. K. Fuchs, “Fault and error models for VLSI”, *Proceedings of the IEEE*, vol. 74, no. 5, pp. 639–654, May 1986.
- [mull:93] V. Hadzilacos and S. Toueg, “Fault tolerant broadcasts and related problems”, In *Distributed Systems*, S. Mullender, editor, pp. 100–102, Addison-Wesley, 2nd edition, 1993.
- [goel:81] P. Goel, “An implicit enumeration algorithm to generate tests for combinational logic circuits”, *IEEE Transactions on Computers*, vol. C-30, no. 3, pp. 215–222, March 1981.
- [siew:92] C. L. Chen and M. Y. Hsiao, “Error-correcting codes for semiconductor memory applications: A state of the art review”, In *Reliable Computer Systems - Design and Evaluation*, D. P. Siewiorek and R. S. Swarz, editors, pp. 771–786, Digital Press, 2nd edition, 1992.
- [mahm:88] A. Mahmood and E. J. McCluskey, “Concurrent error detection using watchdog processor- A survey”, *IEEE Transactions on Computers*, vol. C-37, pp. 160–174, February 1988. A conference version appears in *FTCS-15* (pp.214–219).
- [rotenberg:99] E. Rotenberg, “AR-SMT: A microarchitecture approach to fault tolerance in microprocessors”, *Proceedings of IEEE Fault-Tolerant Computing Symposium*, pp. 84–91, June 1999.
- [rashid:00] F. Rashid, K. K. Saluja, and P. Ramanathan, “Fault tolerance through re-execution in multiscalar architectures”, *Proceedings of IEEE International Conference on Dependable Systems and Networks, also known as FTCS-30*, pp. 482–491, June 2000.

- [oh:88] N. Oh, S. Mitra, and E. J. McCluskey, “ED4I: error detection by diverse data and duplication instructions”, *IEEE Transactions on Computers*, vol. 51, pp. 180–199, February 2002.
- [brooks:96] R. R. Brooks and S. S. Iyengar, “Robust distributed computing and sensing algorithm”, *IEEE Computer*, vol. 29, no. 6, pp. 53–60, June 1996.
- [lapr:90] J.-C. Laprie, J. Arlat, C. Beounes, and K. Kanoun, “Definition and analysis of hardware and software fault-tolerant architectures”, *IEEE Computer*, vol. 23, no. 7, pp. 39–51, July 1990.

Case studies

- [gray:90] J. Gray, “A census of Tandem system availability, 1985-1990”, *IEEE Transactions on Reliability*, vol. 39, no. 4, pp. 409–418, October 1990.
- [carn:85] D. L. Carney, J. I. Cochrane, L. J. Gitten, E. M. Prell, and R. Staehler, “The 5ESS switching system: Architectural overview”, *AT&T Technical Journal*, vol. 64, no. 6, pp. 1339–1356, July 1985.

Material that may not be covered in class

- [yao:99] B. Yao, K. Ssu, and W. K. Fuchs, “Message logging in mobile computing”, *Proceedings of IEEE Fault-Tolerant Computing Symposium*, pp. 294–301, June 1999.
- [krish:99] G. Krishnamurthy and A. Somani, “Effect of failures on optimal location management algorithms”, *Proceedings of IEEE Fault-Tolerant Computing Symposium*, pp. 110–117, June 1999.
- [snow:00] A. P. Snow, U. Varshney, , and A. D. Malloy, “Reliable and survivability of wireless and mobile networks”, *IEEE Computer*, vol. 33, no. 7, pp. 49–55, July 2000.
- [carr:99] J. V. Carreira, D. Costas, and J. G. Silva, “Fault injection spot-checks computer system dependability”, *IEEE Spectrum*, vol. 36, no. 8, pp. 50–55, August 1999.