

Refereed journal articles

(some of the publications are listed below)

1. A. Gulati and S. Rai, "Core discovery in Internet multicast routing protocol," *Journal of Communication Systems* (accepted).
2. S. Rai and Y. C. Oh, "Tighter bounds on full access probability in fault-tolerant multistage interconnection networks," *IEEE Trans. Parallel and Distributed Systems*, vol. 10, No. 3, pp. 328-335, March 1999.
3. S. Rai and Y. C. Oh, "Analyzing packetized voice and video traffic in an ATM multiplexer," *Journal of Communication Systems*, 11, 225-235 (1998).
4. R. R. Brooks, S. S. Iyengar, and S. Rai, "Comparison of genetic algorithms and simulated annealing for cost minimization in a multisensor system," *Optical Engineering*, 37 (2), pp. 1-12, Feb. 1998.
5. S. Rai and V. P. Kirpalani, "A modified TRAM architecture," *IEEE Trans. Computers*, vol. 45, No. 8, pp. 969-974, August 1996.
6. S. Rai and W. Deng, "Hyperneural network - An efficient model for test generation in digital circuits," *IEEE Trans. Computers*, vol. 45, No. 1, pp. 115-121, Jan. 1996.
7. S. Rai, J. Trahan, and T. Smailus, "Processor allocation in faulty hypercube multiprocessors," *IEEE Trans. Parallel and Distributed Systems*, vol. 6, No. 6, pp. 606 - 616, June 1995.
8. S. Rai, M. Veeraraghavan, and K.S. Trivedi, "A survey of efficient reliability computation using disjoint products approach," *Networks*, vol. 25, No. 3, pp. 147-163, May 1995.
9. S. Rai, "Evaluating FTREs for dependability measures in fault tolerant systems," *IEEE Trans. Computers*, vol. 44, No. 2, pp. 275-285, Feb. 1995.
10. J. L. Trahan, D. X. Wang, and S. Rai, "Dependent & multimode failure in reliability evaluation of extra stage shuffle-exchange MINs," *IEEE Trans. Reliability*, vol. 44, pp. 73-86, March 1995.
11. S. Soh, S. Rai, and J.L. Trahan, "Improved lower bounds on the reliability of hypercube architectures," *IEEE Trans. Parallel and Distributed Systems*, pp. 364- 378, April 1994.
12. J. Trahan, S. Rai, "Reliability evaluation and decision problems in extra stage shuffle-exchange MINs," *Networks*, vol. 23, pp. 415 - 426, 1993.
13. S. Soh and S. Rai, "Experimental results on preprocessing of path/cut terms in the sum-of-disjoint-products technique," *IEEE Trans. Reliability*, vol. 42, pp. 24 - 33, March 1993.
14. S. Rai and J. Trahan, "A reconfiguration technique for fault tolerance in a hypercube," *Parallel Processing Letters*, vol. 2, no. 2&3, pp. 129-138, Sept. 1992.
15. S. Soh, S. Rai, and R. Mehrotra, "An efficient approach for channel routing in VLSI," *Int. J. of Computer and Electrical Engineering*, vol. 17, no. 2, pp. 105-112, 1991.

16. S. Rai and S. Soh, "A computer approach for reliability evaluation of telecommunication networks with heterogeneous link capacities," *IEEE Trans. Reliability*, vol. 40, pp. 441-451, Oct. 1991.
17. S. Soh and S. Rai, "CAREL: Computer Aided RELiability evaluator for distributed computing networks," *IEEE Trans. Parallel and Distributed Systems*, pp. 199-213, April 1991.
18. A. Kumar, S. Rai, and D.P. Agrawal, "On computer communication network reliability under program execution constraints," *IEEE Journal on Selected Areas in Communication*, vol. 6, pp. 1393-1400, October 1988.
19. S. Rai, A.K. Sarje, E.V. Prasad, and A. Kumar, "Two recursive algorithms for reliability evaluation of k-out of-n: G system," *IEEE Trans. Reliability*, pp. 261-265, June 1987. [S. Rai, "Author's Reply: Two recursive algorithms for reliability evaluation of k-out-of-n:G systems," *IEEE Trans. Reliability*, vol. R-37, p. 522, Dec. 1988.
20. R. C. Joshi, H. Singh, and S. Rai, "First order 2-D all pass network realization," *IEEE Trans. Acoustics, Speech, and Signal Processing*, vol. ASSP-29, pp.1089-1091, Oct. 1981.
21. R. C. Joshi, H. Singh, and S. Rai, "Realization of 2-D second order all pass digital filter," *Digital Processes*, vol. 6 , pp. 291-296, 1980.