Models and Algorithms for Optical and Optoelectronic Parallel Computers

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This talk briefly reviews some of the more popular parallel-computer models—3D optoelectronic computer, pipelined optical bus, OTIS interconnect, and partitioned optical passive star models—that employ optical interconnect. The interconnect topology and some simple algorithms for each model are also described. Associative page oriented holographic memories made possible by optical technology are also discussed.