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Nota di contenuto	Do faster routers imply faster communication? -- Fast arbitration in dilated routers -- Performance analysis of a minimal adaptive router -- Performance evaluation of adaptive routing algorithms for k-ary n-cubes -- The performance of adaptive routers on worst case permutations -- On the effect of queue sizes and channel scheduling policies in the Segment router -- The offset cube: An optoelectronic interconnection network -- Three-dimensional network topologies -- Support for multiple classes of traffic in multicomputer routers -- Multidestination message passing mechanism conforming to base

wormhole routing scheme -- Multi-address encoding for multicast -- Routing algorithms for IBM SP1 -- Congestion-Free routing on the CM-5 data router -- ROMM routing: A class of efficient Minimal routing algorithms -- Packaging and multiplexing of hierarchical scalable expanders -- Guaranteeing idempotence for tightly-coupled, fault-tolerant networks -- Design of a router for fault-tolerant networks -- The Reliable Router: A reliable and high-performance communication substrate for parallel computers -- Network interface support for user-level buffer management -- Cranium: An interface for message passing on adaptive packet routing networks -- Optimized routing in the Cray T3D -- R2: A damped adaptive router design -- Arctic routing chip.

Sommario/riassunto

This volume contains revised versions of the 23 regular papers presented at the First International Workshop on Parallel Computer Routing and Communication (PCRCW '94), held in Seattle, Washington in May 1994. Routing for parallel computer communication has recently experienced almost explosive activity: ever increasing processor speeds are placing greater demands on interprocessor communication, while technological advances offer new capabilities to respond to those demands. The contributions from industry and academia cover all areas, from details of hardware design to proofs of theoretical results. There are also many papers dealing with the performance of various adaptive routing schemes, new network topologies, network interfaces, and fault-tolerant issues.