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Nota di contenuto	Message from the General Chair -- Message from the Program Chair -- Message from the Steering Committee Chair -- Conference Committees -- Tutorial Session I High-performance Optoelectronic Physical Layers in Systems -- SESSION I: Guided-Wave Optical Interconnects -- Parallel Optical Interconnection for Massively Parallel Processor RWC-1 -- Si COMS Process Compatible Guided-wave Multi-Gbit/sec Optical Clock Signal Distribution System for Cray T-90 Supercomputer -- Experimental Verification of the Pulse Shepherding Concept in Dispersion-Shifted Single-Mode Fiber for Bit-Parallel Wavelength Links -- Multicasting Control and Communications on Multihop Stack-Ring OPS Networks -- Inexpensive Local Interconnect Solutions Using Side-coupling Polymer Optical Fibers -- SESSION III: Free Space Optical Interconnects -- Chair: Andy Walker, Heriot-Watt University -- Applying Optical Interconnects to Electronic Systems Promise vs. Practicality -- Two-Bounce Free-space Arbitrary Interconnection Architecture -- HADLOP - A Hardware Description Language for the Design of Digital 3-D Optoelectronic Circuits -- CONFERENCE PANEL The Evolution of Optical Interconnects Capabilities, Limitations, and Markets -- Tutorial Session II Switching Techniques, Adaptive Routing and Deadlock Handling in Interconnection Networks -- Jose Duato, Universidad Politecnica de Valencia -- SESSION IV: Massively Parallel Processor Interconnects -- Commercial MPP Networks: Time for Optics?

-- Application of Massively Parallel Processors to Real Time Processing of High Speed Images -- SESSION V: Guided and Free-Space Optical Systems -- Wavelength Recognizing Switches: Architectures and System Applications -- Free-Space Modules and Fiber Array Data Links for Optical Interconnect Systems -- 8.5 Gbit/s/port Synchronous Optical Packet-switch -- SESSION VI: Switches and Topological Embedding -- Switches and Switch Interconnections -- BPC Permutations on The OTIS-Mesh Optoelectronic Computer -- Embedding Binary Trees in Arrays with Optical Buses -- Self-routing in 2-D Shuffle Networks with Dimension-dependent Switches and Interconnections -- SESSION VII: Optoelectronics in MPP Computing Systems -- Optics Inside Future Computers -- Systolic Processing Architectures Using Optoelectronic Interconnects -- Free-space Optical Interconnections within SIMD Massively Parallel Computers -- Three-dimensional Optoelectronic Architectures for Massively Parallel Processing Systems -- SESSION VIII: Optical Interconnect Modeling and Experimentation -- Fundamentals of Optical Interconnections - a Review -- Realization of a Smart-Pixel Parallel Optoelectronic Computing System -- Four Multiplexed, 8x8-bit 2-D Parallel Transmission based upon Space-CDMA -- Author Index.

Sommario/riassunto

This text covers the subjects of computer architecture and parallel and high-performance computing.