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Collana	Lecture Notes in Computer Science ; ; 505
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Note generali	Includes index.
Nota di contenuto	Invited Lectures -- Parallel Evaluation of Functional Programs: The λ -machine approach (Summary) -- Towards a Single Model of Efficient Computation in Real Parallel Machines -- Neural Computing and the GALATEA Project -- Submitted Presentations -- A Novel High-Speed Memory Organization for Fine-Grain Multi-Thread Computing -- Evaluation of Futurebus hierarchical caching -- Efficient Global Computations on a Processor Network with Programmable Logic -- POMP or How to design a massively parallel machine with small developments -- The Function Processor: An Architecture for Efficient Execution of Recursive Functions -- The G-Line a Distributed Processor for Graph Reduction -- The Derivation of Distributed Termination Detection Algorithms from Garbage Collection Schemes (Extended Abstract) -- Indirect Reference Counting: A Distributed Garbage Collection Algorithm -- Periodic Multiprocessor Scheduling -- Embeddings of shuffle-like graphs in hypercubes -- Mapping Uniform Recurrences onto Small Size Arrays -- Area Complexity of Multilective Merging -- Deriving Fully Efficient Systolic Arrays by Quasi-Linear Allocation Functions -- Affine Timings for Systems of Affine Recurrence Equations -- On the Computational Complexity of Optimal Sorting Network Verification -- Managing a Parallel Heap Efficiently -- Parallel complexity in the design and analysis of concurrent systems -- FORK: A High-Level Language for PRAMs -- Neural Network-Based Decision

Making for Large Incomplete Databases -- An Optical Content-Addressable Parallel Processor for Fast Searching and Retrieving -- Towards an Efficient Hybrid Dataflow Architecture Model -- Data Flow Implementation of Generalized Guarded Commands -- On the Design of Deadlock-Free Adaptive Routing Algorithms for Multicomputers: Design Methodologies -- A Toolkit for Debugging Parallel Lisp Programs -- Invited Lectures -- Loosely-Coupled Processes (Preliminary Version) -- Rendez-Vous with Metric Semantics -- Embeddings Among Concurrent Programming Languages -- Submitted Presentations -- Invariants and Paradigms of Concurrency Theory -- Acceptance Automata: A Framework for Specifying and Verifying TCSP Parallel Systems -- Models for dynamically placed concurrent processes -- Formalisation of the Behavior of Actors by Colored Petri Nets and Some Applications -- Program Refinement in Fair Transition Systems -- Communication Abstraction and Refinement -- On the semantics of languages for massively parallel SIMD architectures -- A Denotational Real-Time Semantics for Shared Processors -- Concurrent Clean -- The Scriptic Programming Language -- Structural Operational Semantics for Kernel Andorra Prolog -- Customization of First-Class Tuple-Spaces in a Higher-Order Language -- A Formal Specification of the Process Trellis -- Strong Bisimilarity on Nets Revisited -- A Configuration Approach to Parallel Programming -- Chaotic Linear System Solvers in a Variable-Grain Data-Driven Multiprocessor System -- Parallel Associative Combinator Evaluation -- Static Analysis of Term Graph Rewriting Systems -- Scheduling of OR-parallel Prolog on a Scalable, Reconfigurable, Distributed-Memory Multiprocessor -- Flexible Scheduling of Or-parallelism in Aurora: The Bristol Scheduler -- Virtual Memory Support for OR-Parallel Logic Programming Systems -- Interfacing Engines and Schedulers in Or-Parallel Prolog Systems -- Reduction of Code Space in Parallel Logic Programming Systems -- Search Level Parallel Processing of Production Systems.

Sommario/riassunto

The innovative progress in the development of large- and small-scale parallel computing systems and their increasing availability have caused a sharp rise in interest in the scientific principles that underlie parallel computation and parallel programming. The biannual "Parallel Architectures and Languages Europe" (PARLE) conferences aim at presenting current research material on all aspects of the theory, design, and application of parallel computing systems and parallel processing. At the same time, the goal of the PARLE conferences is to provide a forum for researchers and practitioners to exchange ideas on recent developments and trends in the field of parallel computing and parallel programming. The first two conferences, PARLE '87 and PARLE '89, have succeeded in meeting this goal and made PARLE a conference that is recognized worldwide in the field of parallel computation. PARLE '91 again offers a wealth of high-quality research material for the benefit of the scientific community. Compared to its predecessors, the scope of PARLE '91 has been broadened so as to cover the area of parallel algorithms and complexity, in addition to the central themes of parallel architectures and languages. The proceedings of the PARLE '91 conference contain the text of all contributed papers that were selected for the programme and of the invited papers by leading experts in the field.
