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Nota di contenuto	How Can the Earth Simulator Impact on Human Activities -- Toward Architecting and Designing Novel Computers -- Designing Ultra-large Instruction Issue Windows -- Multi-threaded Microprocessors – Evolution or Revolution -- The Development of System Software for Parallel Supercomputers -- Asynchronous Bit-Serial Datapath for Object-Oriented Reconfigurable Architecture PCA -- Reconfigurable Logic: A Saviour for Experimental Computer Architecture Research -- Design and Implementation of Java Processors -- MOOSS: CPU

Architecture with Memory Protection and Support for OOP -- Reducing Access Count to Register-Files through Operand Reuse -- SimAlpha Version 1.0: Simple and Readable Alpha Processor Simulator -- Towards an Asynchronous MIPS Processor -- On Implementing High Level Concurrency in Java -- Simultaneous MultiStreaming for Complexity-Effective VLIW Architectures -- A Novel Architecture for Genomic Sequence Searching and Alignment -- A Reconfigurable Multi-threaded Architecture Model -- Reconfigurable Instruction-Level Parallel Processor Architecture -- Mapping Applications to a Coarse Grain Reconfigurable System -- Packing with Boundary Constraints for a Reconfigurable Operating System -- Arithmetic Circuits Combining Residue and Signed-Digit Representations -- A New On-the-fly Summation Algorithm -- State Reordering for Low Power Combinational Logic -- User-Level Management of Kernel Memory -- Variable Radix Page Table: A Page Table for Modern Architectures -- L1 Cache and TLB Enhancements to the RAMpage Memory Hierarchy -- Legba: Fast Hardware Support for Fine-Grained Protection -- Live-Cache: Exploiting Data Redundancy to Reduce Leakage Energy in a Cache Subsystem -- Implementation of Fast Address-Space Switching and TLB Sharing on the StrongARM Processor -- Performance of the Achilles Router -- Latency Improvement in Virtual Multicasting -- A Router Architecture to Achieve Link Rate Throughput in Suburban Ad-hoc Networks.

Sommario/riassunto

This conference marked the ?rst time that the Asia-Paci?c Computer Systems Architecture Conference was held outside Australasia (i. e. Australia and New Zealand), and was, we hope, the start of what will be a regular event. The conference started in 1992 as a workshop for computer architects in Australia and subsequently developed into a full-?edged conference covering Austra- sia. Two additional major changes led to the present conference. The ?rst was a change from “computer architecture” to “computer systems architecture”, a change that recognized the importance and close relationship to computer arc- tecture of certain levels of software (e. g. operating systems and compilers) and of other areas (e. g. computer networks). The second change, which re?ected the increasing number of papers being submitted from Asia, was the replacement of “Australasia” with “Asia-Paci?c”. This year’s event was therefore particularly signi?cant, in that it marked the beginning of a truly “Asia-Paci?c” conference. It is intended that in the future the conference venue will alternate between Asia and Australia/New Zealand and, although still small, we hope that in time the conference will develop into a major one that represents Asia to the same - tent as existing major computer-architecture conferences in North America and Europe represent those regions.