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Nota di contenuto	Main Conference -- Approximate Data Dependence Pro ling based on Abstract Interval and Congruent Domains -- Evaluating Dynamic Task Scheduling with Priorities and Adaptive Aging in a Task-based Runtime System -- An Architecture for Solving the Eigenvalue Problem on Embedded FPGAs -- ECC Memory for Fault Tolerant RISC-V Processors -- 3D Optimisation of Software Application Mappings on Heterogeneous MPSoCs -- Towards a Priority-Based Task Distribution Strategy for an Artificial Hormone System -- He..ro DB: A Concept for Parallel Data Processing on Heterogeneous Hardware -- Investigating Transactional Memory for High Performance Embedded Systems -- X-CEL: A Method to Estimate Near-Memory Acceleration Potential in Tile-

based MPSoCs -- Engineering an Optimized Instruction Set Architecture for AMIDAR Processors -- Scaling Logic Locking Schemes to Multi-Module Hardware Designs -- Exploration of Power Domain Partitioning with Concurrent Task Mapping and Scheduling for Application-specific Multi-core SoCs -- FORMUS3IC Workshop -- Scalable, Decentralized Battery Management System Based on Self-Organizing Nodes -- Security Improvements by Separating the Cryptographic Protocol from the Network Stack onto a Multi-MCU Architecture -- Equally Distributed Bus-Communication Access Rights for Inter MCU Communication using Multimaster SPI -- Workshop on Computer Architectures in Space (CompSpace) -- On the Evaluation of SEU Effects on AXI Interconnect within AP-SoCs -- Satellite Onboard Data Reduction using a Risc-V core inside an RTG4-based Data Processing Pipeline -- Workshop on Parallel Systems and Algorithms (PASA) -- Accelerating Real-Time Applications with Predictable Work-Stealing.

Sommario/riassunto

This book constitutes the proceedings of the 33rd International Conference on Architecture of Computing Systems, ARCS 2020, held in Aachen, Germany, in May 2020.* The 12 full papers in this volume were carefully reviewed and selected from 33 submissions. 6 workshop papers are also included. ARCS has always been a conference attracting leading-edge research outcomes in Computer Architecture and Operating Systems, including a wide spectrum of topics ranging from embedded and real-time systems all the way to large-scale and parallel systems. The selected papers focus on concepts and tools for incorporating self-adaptation and self-organization mechanisms in high-performance computing systems. This includes upcoming approaches for runtime modifications at various abstraction levels, ranging from hardware changes to goal changes and their impact on architectures, technologies, and languages. *The conference was canceled due to the COVID-19 pandemic.
