

1. Record Nr.	UNINA9910484714403321
Titolo	High Performance Computing Systems. Performance Modeling, Benchmarking and Simulation : 4th International Workshop, PMBS 2013, Denver, CO, USA, November 18, 2013. Revised Selected Papers / / edited by Stephen A. Jarvis, Steven A. Wright, Simon D. Hammond
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-10214-1
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XII, 295 p. 136 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 8551
Disciplina	004
Soggetti	Electronic digital computers—Evaluation Computer engineering Computer networks Computer simulation System Performance and Evaluation Computer Engineering and Networks Computer Modelling
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Section A: Performance Benchmarking and Analysis Quantifying Architectural Requirements of Contemporary Extreme-Scale Scientific Applications -- Performance Evaluation of the Intel Sandy Bridge Based NASA Pleiades Using Scientific and Engineering Applications -- Analysis of Cray XC30 Performance using Trinity- NERSC-8 benchmarks and comparison with Cray XE6 and IBM BG/Q -- Analysis of Data Reuse in Task-Parallel Runtimes -- Section B: Performance Modeling and Simulation -- Using Simulation to Evaluate the Performance of Resilience Strategies at Scale -- Characterizing the Impact of Prefetching on Scientific Application Performance -- Performance Modeling of Gyrokinetic Toroidal Simulations for a Many-tasking Runtime System -- Toward Better Simulation of MPI Applications on Ethernet/TCP Networks -- SESH framework: A Space Exploration Framework for GPU Application and Hardware Codesign -- Optimal

Checkpointing Period: Time vs. Energy -- Section C: Performance Optimization -- Tuning HipGISAXS on Multi and Many Core Supercomputers -- Multi Objective Optimization of HPC Kernels for Performance, Power, and Energy -- Performance Tuning of Fock Matrix and Two-Electron Integral Calculations for NWChem on Leading HPC Platforms.-Performance analysis of the NWChem TCE for different communication patterns.

Sommario/riassunto

This book constitutes the refereed proceedings of the 4th International Workshop, PMBS 2013 in Denver, CO, USA in November 2013. The 14 papers presented in this volume were carefully reviewed and selected from 37 submissions. The selected articles broadly cover topics on massively parallel and high-performance simulations, modeling and simulation, model development and analysis, performance optimization, power estimation and optimization, high performance computing, reliability, performance analysis, and network simulations.
