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Nota di contenuto	A High Arithmetic Intensity Krylov Subspace Method Based on Stencil Compiler Programs -- Applications of trace estimation techniques -- Fourier Method for Approximating Eigenvalues of Indefinite Stekloff Operator -- Proportionality-based gradient methods with applications in contact mechanics -- Schur Complement-Schwarz DD Preconditioners for Non-Stationary Darcy Flow Problems -- Relating computed and exact entities in methods based on Lanczos tridiagonalization -- Software Tool for Cranial Orthosis Design -- Implementation of BM3D Filter on Intel Xeon Phi for Rendering in Blender Cycles -- Investigating convergence of linear SVM implemented

in PermonSVM employing MPRGP algorithm -- Using ESPRESO as Linear Solver Library for Third Party FEM Tools for Solving Large Scale Problems -- MERIC and RADAR generator: tools for energy evaluation and runtime tuning of HPC applications -- Disc vs. annulus: On the bleaching pattern optimization for FRAP experiments -- Modeling and simulation of microalgae growth in a Couette-Taylor bioreactor -- Karhunen-Loéve decomposition of isotropic Gaussian random fields using a tensor approximation of autocovariance kernel -- A Bayesian approach to the identification problem with given material interfaces in the Darcy flow.

Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the Third International Conference on High Performance Computing in Science and Engineering, HPCSE 2017, held in Karolinka, Czech Republic, in May 2017. The 15 papers presented in this volume were carefully reviewed and selected from 20 submissions. The conference provides an international forum for exchanging ideas among researchers involved in scientific and parallel computing, including theory and applications, as well as applied and computational mathematics. The focus of HPCSE 2017 was on models, algorithms, and software tools which facilitate efficient and convenient utilization of modern parallel and distributed computing architectures, as well as on large-scale applications.