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Nota di contenuto	Thermal Characterization of a Tier0 Datacenter Room In Normal and Thermal Emergency Conditions -- Towards Local-Failure Local-Recovery in PDE Frameworks: the Case of Linear Solvers -- Complexity Analysis of a Fast Directional Matrix-Vector Multiplication -- Fast Large-Scale Boundary Element Algorithms -- Solving Large-Scale Interior Eigenvalue Problems to Investigate the Vibrational Properties of the Boson PeakRregime in Amorphous Materials -- Performance Evaluation of Pseudospectral Ultrasound Simulations on a Cluster of Xeon Phi Accelerators -- Estimation of Execution Parameters for k-Wave Simulations -- Analysis and Visualization of the Dynamic Behavior of HPC Applications -- A Convenient Graph Connectedness for Digital Imagery.
Sommario/riassunto	This book constitutes the thoroughly refereed post-conference proceedings of the 4th International Conference on High Performance Computing in Science and Engineering, HPCSE 2019, held in Karolinka, Czech Republic, in May 2019. The 9 papers presented in this volume were carefully reviewed and selected from 13 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 2019 was on models, algorithms, and software tools that facilitate efficient and convenient utilization of modern parallel and distributed computing architectures, as well as on large-scale applications.