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	Descrizione fisica	1 online resource (218 p.)
	Disciplina	510
	Soggetti	Mathematics - Data processing Computer simulation Computer engineering Computer networks Application software Engineering mathematics Engineering - Data processing Fluid mechanics Computational Science and Engineering Computer Modelling Computer Engineering and Networks Computer and Information Systems Applications Mathematical and Computational Engineering Applications Engineering Fluid Dynamics
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	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references at the end of each chapters.
	Nota di contenuto	Part I Techniques and Tools for High Performance Systems -- Part II Numerical Methods and Technologies for High Performance Computing -- Part III Numerical Methods, Physical Simulation and Engineering Application.
	Sommario/riassunto	The book presents the state of the art in high-performance computing and simulation on modern supercomputer architectures. It covers

trends in hardware and software development in general, and the future of high-performance systems and heterogeneous architectures specifically. The application contributions cover computational fluid dynamics, material science, medical applications and climate research. Innovative fields like coupled multi-physics or multi-scale simulations are also discussed. All papers were chosen from presentations given at the 20th Workshop on Sustained Simulation Performance in December 2014 at the HLRS, University of Stuttgart, Germany, and the subsequent Workshop on Sustained Simulation Performance at Tohoku University in February 2015. .