1. Record Nr. UNINA9910254077703321

Titolo	High Performance Computing in Science and Engineering ´15 : Transactions of the High Performance Computing Center, Stuttgart (HLRS) 2015 / / edited by Wolfgang E. Nagel, Dietmar H. Kröner, Michael M. Resch
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-24633-X
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (687 p.)
Disciplina	510
Soggetti	Computer mathematics Mathematical physics Applied mathematics Engineering mathematics Chemistry, Physical and theoretical Computational Science and Engineering Theoretical, Mathematical and Computational Physics Mathematical and Computational Engineering Theoretical and Computational Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Preface -- Part I: Physics -- Part II: Molecules, Surfaces, and Solids -- Part III: Bioinformatics -- Part IV: Reacting Flows -- Part V: Computational Fluid Dynamics.- Part VI: Transport and Climate -- Part VII: Miscellaneous Topics.
Sommario/riassunto	This book presents the state-of-the-art in supercomputer simulation. It includes the latest findings from leading researchers using systems from the High Performance Computing Center Stuttgart (HLRS) in 2015. The reports cover all fields of computational science and engineering ranging from CFD to computational physics and from chemistry to computer science with a special emphasis on industrially relevant applications. Presenting findings of one of Europe’s leading systems, this volume covers a wide variety of applications that deliver a high

level of sustained performance. The book covers the main methods in high-performance computing. Its outstanding results in achieving the best performance for production codes are of particular interest for both scientists and engineers. The book comes with a wealth of color illustrations and tables of results.