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| Soggetti | Mathematics - Data processing Mathematical physics Engineering mathematics Engineering - Data processing Chemistry, Physical and theoretical Computer science - Mathematics Computational Science and Engineering Theoretical, Mathematical and Computational Physics Mathematical and Computational Engineering Applications Theoretical Chemistry Mathematical Applications in Computer Science |
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| Formato | Materiale a stampa |
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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Part I Physics -- Part II Molecules, Interfaces, and Solids -- Part III Reactive Flows -- Part IV Computational Fluid Dynamics -- Part V Transport and Climate -- Part VI Computer Science -- 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 2021. 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.
