

1. Record Nr.	UNINA9910484291403321
Autore	Du Sautoy Marcus
Titolo	Zeta functions of groups and rings // Marcus du Sautoy, Luke Woodward
Pubbl/distr/stampa	Berlin ; ; Heidelberg : , : Springer-Verlag, , [2008] ©2008
ISBN	3-540-74776-1
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (XII, 212 p.)
Collana	Lecture Notes in Mathematics ; ; 1925
Disciplina	515.56
Soggetti	Functions, Zeta Group theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. [201]-203) and indexes.
Nota di contenuto	Nilpotent Groups: Explicit Examples -- Soluble Lie Rings -- Local Functional Equations -- Natural Boundaries I: Theory -- Natural Boundaries II: Algebraic Groups -- Natural Boundaries III: Nilpotent Groups.
Sommario/riassunto	Zeta functions have been a powerful tool in mathematics over the last two centuries. This book considers a new class of non-commutative zeta functions which encode the structure of the subgroup lattice in infinite groups. The book explores the analytic behaviour of these functions together with an investigation of functional equations. Many important examples of zeta functions are calculated and recorded providing an important data base of explicit examples and methods for calculation.

2. Record Nr.	UNINA9910965591503321
Titolo	Evolving the high performance computing and communications initiative to support the nation's information infrastructure // Committee to Study High Performance Computing and Communications: Status of a Major Initiative, Computer Science and Telecommunications Board, Commission on Physical Science, Mathematics, and Applications, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1995
ISBN	9786610192915 9781280192913 1280192917 9780309588034 0309588030 9780585002088 0585002088
Edizione	[1st ed.]
Descrizione fisica	1 online resource (133 p.)
Disciplina	338.4/7004
Soggetti	Electronic data processing Telecommunication - United States Computer networks Data transmission systems Information networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Evolving the High Performance Computing and Communications Initiative to Support the Nation's Information Infrastructure -- Copyright -- Preface -- Contents -- Executive Summary -- INFORMATION TECHNOLOGY-FUNDAMENTAL FOR SOCIETY AND THE ECONOMY NOW AND TOMORROW -- The Basis for Continuing Strength-A Successful Government-Industry Partnership -- Government Support of Research Is Crucial -- THE HIGH PERFORMANCE COMPUTING AND COMMUNICATIONS INITIATIVE -- Goals and

Emphases -- High Performance -- Accomplishments to Date -- Evolution -- Organization -- Budget -- THE FUTURE OF THE HPCCI: RECOMMENDATIONS -- General Recommendations -- High Performance Computing -- Networking and Information Infrastructure -- Supercomputer Centers and Grand Challenge Program -- Coordination and Program Management -- NOTES -- 1 U.S. Leadership in Information Technology -- INFORMATION TECHNOLOGY IS CENTRAL TO OUR SOCIETY -- INFORMATION TECHNOLOGY ADVANCES RAPIDLY -- RETAINING LEADERSHIP IN INFORMATION TECHNOLOGY IS VITAL TO THE NATION -- THE FEDERAL INVESTMENT IN COMPUTING RESEARCH HAS PAID RICH DIVIDENDS -- CONTINUED FEDERAL INVESTMENT IS NECESSARY TO SUSTAIN OUR LEAD -- TODAY THE HPCCI IS THE UMBRELLA FOR MOST GOVERNMENT-SPONSORED COMPUTING AND COMMUNICATIONS RESEARCH -- NOTES -- 2 The High Performance Computing and Communications Initiative -- HPCCI: GOALS AND EMPHASES -- Basic Objectives -- Teraflop Capability -- High-speed Networks -- Grand Challenges -- Expanded Objectives -- HPCCI ACCOMPLISHMENTS -- The Issue of Measurement -- Better Computing and Computational Infrastructure -- Increasing Researcher-Developer-User Synergy -- Impact of Broad Collaboration -- Transfer of Expertise and Technology -- Impact on Mission Agencies -- Five Gigabit Testbed Projects: Collaboration and Impact -- EVOLUTION OF HPCCI GOALS AND OBJECTIVES -- Improving the Information Infrastructure. Evolving Research Directions and Relevance for the Information Infrastructure -- Overall Computing and Communications R&D Planning -- Toward a Better Balance -- MOVING FORWARD-BASIC ISSUES -- Balance of Private and Public Investment -- Coordination Versus Management -- Coordinating Structure -- Drawbacks of Centralization -- National Coordination Office -- Budget -- NOTES -- 3 Recommendations -- GENERAL RECOMMENDATIONS -- RECOMMENDATIONS ON HIGH-PERFORMANCE COMPUTING -- RECOMMENDATIONS ON NETWORKING AND INFORMATION INFRASTRUCTURE -- RECOMMENDATIONS ON THE SUPERCOMPUTER CENTERS AND GRAND CHALLENGE PROGRAM -- RECOMMENDATIONS ON COORDINATION AND PROGRAM MANAGEMENT IN THE HPCCI -- COMMENTS RELATING THIS REPORT'S RECOMMENDATIONS FOR HIGH PERFORMANCE COMPUTING AND COMMUNICATIONS RE ... -- NOTES -- Bibliography -- Appendixes -- A The High Performance Computing and Communications Initiative: Background -- THE TECHNICAL-ECONOMIC IMPERATIVE FOR PARALLEL COMPUTING -- The United States Needs More Powerful Computers and Communications -- Conventional Supercomputers Face Cost Barriers -- Small Computers Are Becoming Faster, Cheaper, and More Widely Used -- Parallel Computers: High Performance for Radically Lower Cost -- CHALLENGES OF PARALLEL COMPUTING -- Applications -- Hardware Design -- Numerical Algorithms -- Learning New Modes of Thought -- A NEW PARADIGM -- COMPUTER ARCHITECTURES -- Overview -- Sequential, Vector -- Parallel -- Generations of Parallel Computers -- First Commercial Generation: SIMD -- Second Generation: Message-Passing MIMD -- Third Generation: Memory-Sharing MIMD -- Programming -- Algorithms -- A SKETCH OF THE HPCCI'S HISTORY -- Development and Participants -- Concerns Raised in Recent Studies -- GAO Report -- CBO Report -- NOTES -- B High-Performance Communications Technology and Infrastructure. HIGH-PERFORMANCE COMMUNICATIONS TECHNOLOGY AND INFRASTRUCTURE ADVANCE -- C Review of the High Performance Computing and Communications Initiative Budget -- BUDGET REVIEW -- Commentary: Many Possibilities for Misinterpretation -- NOTES -- D

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DEPARTMENT OF ENERGY -- NATIONAL AERONAUTICS AND SPACE  
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ATMOSPHERIC ADMINISTRATION -- E Accomplishments of National  
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Architectures -- Storage Technologies, File Format, and File Systems --  
NSFNET and Networking -- Visualization and Virtual Reality -- Desktop  
Software, Connectivity, and Collaboration Tools -- ACCOMPLISHMENTS  
IN EDUCATION AND OUTREACH -- Researchers and Students -- K-12  
Educators and Students -- Broad Outreach -- SCIENTIFIC  
COMPUTATION AND INDUSTRIAL DEVELOPMENT -- IMPORTANT  
SCIENCE AND ENGINEERING ACCOMPLISHMENTS -- Quantum Physics  
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Cosmology -- F Individuals Providing Briefings to the Committee.

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Sommario/riassunto

Maintaining the United States' strong lead in information technology will require continued federal support of research in this area, most of which is currently funded under the High Performance Computing and Communications Initiative (HPCCI). The Initiative has already accomplished a great deal and should be continued. This book provides 13 major recommendations for refining both HPCCI and support of information technology research in general. It also provides a good overview of the development of HPCC technologies.

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