

1. Record Nr.	UNINA9910812588003321
Titolo	Computational and experimental group theory : AMS-ASL joint special session, interactions between logic, group theory, and computer science, January 15-16, 2003, Baltimore, Maryland // Alexandre V. Borovik, Alexei G. Myasnikov, editors
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , [2004] ©2004
ISBN	0-8218-7939-1 0-8218-5684-7
Descrizione fisica	1 online resource (234 p.)
Collana	Contemporary mathematics, , 0271-4132 ; ; 349
Disciplina	512/.21
Soggetti	Permutation groups Non-Abelian groups Quantum theory - Mathematics
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.
Nota di contenuto	""Contents""; ""Preface""; ""Quantum algorithms in group theory""; ""1. Introduction""; ""2. The basics of quantum computing""; ""3. The Deutsch-Jozsa algorithm""; ""4. Shor's algorithm and factoring integers""; ""5. Grover's algorithm""; ""6. Watrous' algorithms for solvable groups""; ""References""; ""Genetic algorithms and equations in free groups and semigroups""; ""1. Introduction""; ""2. A genetic algorithm framework on the free group""; ""3. Choosing problems""; ""4. Traceback""; ""5. Coevolution""; ""6. The genus problem and equations in a free semigroup"" ""7. The algorithm for the genus problem""; ""8. Discussion""; ""9. One more case study: restricted conjugacy problem in free partially commutative groups""; ""References""; ""One variable equations in free groups via context free languages""; ""1. Introduction""; ""2. Results from Language Theory""; ""3. Proof of Theorem 1""; ""References""; ""Whitehead method and genetic algorithms""; ""1. Introduction""; ""2. Whitehead method""; ""3. Description of the genetic algorithm""; ""4. Experiments and results""; ""5. Time complexity of GWA""; ""6.

Mathematical problems arising from the experiments"

"References""The structure of automorphic conjugacy in the free group of rank two"; "1. The automorphism graph of F_2 "; "2.

Combinatorial groundwork"; "3. The structure within levels"; "4.

Algorithmic applications"; "5. Computational tools"; "6. Conclusions

and future work"; "References"; "Pattern recognition approaches to solving combinatorial problems in free groups"; "1. Introduction"; "2.

General remarks on pattern recognition tasks"; "3. Feature vectors";

"4. Pattern recognition tools and models"; "5. Recognizing Whitehead minimal words in free groups"

"References""Experimenting with primitive elements in F_2 "
