Mathematical Foundation Of Computer Science By Rajendra Prasad

This book provides the basic concepts and applications of discrete mathematics and graph theory. The book is aimed at undergraduate students of Computer Science and Engineering, and Information Technology. It is also suitable for undergraduate and postgraduate students of Computer Science, Mathematics and Computer Applications. The book exposes the students to fundamental knowledge in : Mathematical logic, tautology and normal forms Predicate logic, rules of inference and validity of arguments Elementary set theory, Venn diagrams, functions and their relations Algebraic structure, binary operation, group theory and homomorphism Theory of permutations and combinations, binomial and multinomial theorems Recurrence relations and methods of solving them Graph theory, spanning tree, Eulerian and Hamiltonian circuits and isomorphism

This book presents the proceedings of the 20th International Symposium on Mathematical Foundations of Computer Science, MFCS'95, held in Prague, Czech Republic in August/September 1995. The book contains eight invited papers and two abstracts of invited talks by outstanding scientists as well as 44 revised full research papers selected from a total of 104 submissions. All relevant aspects of theoretical computer science are addressed, particularly the mathematical foundations; the papers are organized in sections on structural complexity, algorithms, complexity theory, graphs in models of computation, lower bounds, formal languages, unification, rewriting and type theory, distributed computation, concurrency, semantics, model checking, and formal calculi.

This book presents topics from mathematics which are relevant and useful to computer science. This book treats basic topics such as number theory, set theory, functions etc. in a simple way. Each chapter has been planned as independent unit so that various interrelated topics can also be read independently. Ample amount of examples and problems are given at the end of each chapter to help both the students and researchers. Hints and answers are also given for the problems in the exercise to help the students for self-learning. Please note: Taylor & Francis does not sell or distribute the Hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka

Mathematical Foundations of Computer Science 2006

27th International Symposium, MFCS 2002, Warsaw, Poland, August 26-30, 2002. Proceedings

23rd International Symposium, MFCS'98, Brno, Czech Republic, August 24-28, 1998

Mathematical Foundations of Computer Science 2002

Mathematical Foundations of Computer Science 2008

Theoretical and Mathematical Foundations of Computer Science

22nd International Symposium, MFCS'97, Bratislava, Slovakia, August 25-29, 1997, Proceedings

This book constitutes the refereed proceedings of the 25th International Symposium on Mathematical Foundations of Computer Science, MFCS 2000, held in Bratislava/Slovakia in August/September 2000. The 57 revised full papers presented together with eight invited papers were carefully reviewed and selected from a total of 147 submissions. The book gives an excellent overview on current research in theoretical informatics. All relevant foundational issues, from mathematical logics as well as from discrete mathematics are covered. Anybody interested in theoretical computer science or the theory of computing will benefit from this book.

This book constitutes the refereed post-conference proceedings of the Second International Andrei Ershov Memorial Conference on System Informatics, held in Akademgorodok, Novosibirsk, Russia, in June 1996. The 27 revised full papers presented together with 9 invited contributions were thoroughly refereed for inclusion in this volume. The book is divided in topical sections on programming methodology, artificial intelligence, natural language processing, machine learning, dataflow and concurrency models, parallel programming, supercompilation, partial evaluation, object-oriented programming, semantics and abstract interpretation, programming and graphical interfaces, and logic programming.

This book deals with those topics from mathematics that have proven to be particularly relevant in computer science. The particular topics are mostly of a set-theoretical nature: sets, relations and functions, partially ordered sets, induction, enumerability, and diagonalization. This book is organized by mathematical area, which means that material on the same computer science topic appears in more than one place. Readers will find useful applications in algorithms, databases, semantics of programming languages, formal languages, theory of computation, and program verification. There are few specific mathematical prerequisites for understanding the material in this volume, but it assumes the mathematical maturity gained from a good mathematics or computer science undergraduate major.

6th Symposium, Tatranska Lomnica September 5-9, 1977. Proceedings

Mathematical Foundations of Computer Science 2011

Mathematical Foundation of Computer Science

29th International Symposium, MFCS 2004, Prague, Czech Republic, August 22-27, 2004, Proceedings

20th International Symposium, MFCS'95, Prague, Czech Republic, August 28 - September 1, 1995. Proceedings

Sets, Relations, and Induction

Mathematical Foundations of Computer Science 1996

This book constitutes the refereed proceedings of the 26th International Symposium on Mathematical Foundations of Computer Science, MFCS 2001, held in Marianske Lazne, Czech Republic in August 2001. The 51 revised full papers presented together with 10 invited contributions were carefully reviewed and selected from a total of 118 submissions. All current aspects of theoretical computer science are addressed ranging from mathematical logic and programming theory to algorithms, discrete mathematics, and complexity theory. Besides classical issues, modern topics like quantum computing are discussed as well.

This volume contains the proceedings of a Polish/Czechoslovakian symposium on topics including parallel and distributed computing, software specification and development, logic and semantics of programs, algorithms, complexity and computability theory.

Explains the fundamental concepts in mathematics. It can be used by the students in computer science as an introduction to the underlying ideas of mathematics for computer science. It explains topics like mathematical logic, predicates, relations, functions, combinatorics, algebraic structures and graph theory. It would be useful for the students of B.Tech, BCA, & MCA. Key Features: * Comprehensive discussion on logic, function, algebraic systems, recurrence relations and graph theory * Wide variety of exercises at all levels * Several worked out examples

33rd International Symposium, MFCS 2008, Torun, Poland, August 25-29, 2008, Proceedings

Mathematical Foundation for Computer Science

40th International Symposium, MFCS 2015, Milan, Italy, August 24-28, 2015, Proceedings, Part II

Mathematical Foundations of Computer Science 2014

32nd International Symposium, MFCS 2007 Ceský Krumlov, Czech Republic, August 26-31, 2007, Proceedings

21st International Symposium, MFCS' 96, Crakow, Poland, September 2 - 6, 1996. Proceedings

Foundation Mathematics for Computer Science

The Interesting Feature Of This Book Is Its Organization And Structure. That Consists Of Systematizing Of The Definitions, Methods, And Results That Something Resembling A Theory. Simplicity, Clarity, And Precision Of Mathematical Language Makes Theoretical Topics More Appealing To The Readers Who Are Of Mathematical Or Non-Mathematical Background. For Quick References And Immediate Attentions3 / 4Concepts And Definitions, Methods And Theorems, And Key Notes Are Presented Through Highlighted Points From Beginning To End. Whenever, Necessary And Probable A Visual Approach Of Presentation Is Used. The Amalgamation Of Text And Figures Make Mathematical Rigors Easier To Understand. Each Chapter Begins With The Detailed Contents, Which Are Discussed Inside The Chapter And Conclude With A Summary Of The Material Covered In The Chapter. Summary Provides A Brief Overview Of All The Topics Covered In The Chapter. To Demonstrate The Principles Better, The Applicability Of The Concepts Discussed In Each Topic Are Illustrated By Several Examples Followed By The Practice Sets Or Exercises.

This book constitutes the refereed proceedings of the 23rd International Symposium on the Mathematical Foundations of Computer Science, MFCS'98, held in Brno, Czech Republic, in August 1998. The 71 revised full papers presented were carefully reviewed and selected from a total of 168 submissions. Also included are 11 full invited surveys by prominent leaders in the area. The papers are organized in topical sections on problem complexity; logic, semantics, and automata; rewriting; automata and transducers; typing; concurrency, semantics, and logic; circuit complexity; programming; structural complexity; formal languages; graphs; Turing complexity and logic; binary decision diagrams, etc..

This book constitutes the refereed proceedings of the 30th International Symposium on Mathematical Foundations of Computer Science, MFCS 2005, held in Gdansk, Poland in August/September 2005. The 62 revised full papers presented together with full papers or abstracts of 7 invited talks were carefully reviewed and selected from 137 submissions. All current aspects in theoretical computer science are addressed, ranging from quantum computing, approximation, automata, circuits, scheduling, games, languages, discrete mathematics, combinatorial optimization, graph theory, networking, algorithms, and complexity to programming theory, formal methods, and mathematical logic.

12th Symposium held at Bratislava, Czechoslovakia, August 25-29, 1986. Proceedings

Mathematical Foundations of Computer Science 2003

34th International Symposium, MFCS 2009, Novy Smokovec, High Tatras, Slovakia, August 24-28, 2009, Proceedings

Mathematical Foundations of Computer Science 1991

Mathematical Foundations of Computer Science 1997

26th International Symposium, MFCS 2001 Marianske Lazne, Czech Republic, August 27-31, 2001 Proceedings

28th International Symposium, MFCS 2003, Bratislava, Slovakia, August 25-29, 2003, Proceedings

This book constitutes the refereed proceedings of the 34th International Symposium on Mathematical Foundations of Computer Science, MFCS 2009, held in Novy Smokovec, High Tatras, Slovakia, in August 2009. The 56 revised full papers presented together with 7 invited lectures were carefully reviewed and selected from 148 submissions. All current aspects in theoretical computer science and its mathematical foundations are addressed, including algorithmic game theory, algorithmic tearning theory, algorithms and data structures, automata, grammars and formal languages, bioinformatics, complexity, computational geometry, computer-assisted reasoning, concurrency theory, cryptography and security, databases and knowledge-based systems, formal specifications and program development, foundations of computing, logic in computer science, mobile computing, models of computation, networks, parallel and distributed computing, quantum computing, semantics and verification of programs, theoretical issues in artificial intelligence.

This book constitutes the refereed proceedings of the 32nd International Symposium on Mathematical Foundations of Computer Science, MFCS

2007, held in Cesk? Krumlov, Czech Republic, August 26-31, 2007. The 61 revised full papers presented together with the full papers or abstracts of 5 invited talks were carefully reviewed and selected from 167 submissions. All current aspects in theoretical computer science and its mathematical foundations are addressed, ranging from algorithms and data structures, to complexity, automata, semantics, logic, formal specifications, models of computation, concurrency theory, computational geometry, parallel and distributed computing, networks, bioinformatics, quantum computing, cryptography, knowledge-based systems, and artificial intelligence.

This book constitutes the refereed proceedings of the 28th International Symposium on Mathematical Foundations of Computer Science, MFCS 2003, held in Bratislava, Slovakia in August 2003. The 55 revised full papers presented together with 7 invited papers were carefully reviewed and selected from 137 submissions. All current aspects in theoretical computer science are addressed, ranging from discrete mathematics, combinatorial optimization, graph theory, networking, algorithms, and complexity to programming theory, formal methods, and mathematical logic.

Mathematical Foundations of Computer Science 2009

Mathematical Foundations of Computer Science 1978

Mathematical Foundations of Computer Science 2007

25th International Symposium, MFCS 2000 Bratislava, Slovakia, August 28 - September 1, 2000 Proceedings

Mathematical Foundations of Computer Science 2012

Mathematical Foundations of Computer Science 1998

16th International Symposium, Kazimierz Dolny, Poland, September 9-13, 1991. Proceedings

In this second edition of Foundation Mathematics for Computer Science, John Vince has reviewed and edited the original book and written new chapters on combinatorics, probability, modular arithmetic and complex numbers. These subjects complement the existing chapters on number systems, algebra, logic, trigonometry, coordinate systems, determinants, vectors, matrices, geometric matrix transforms, differential and integral calculus. During this journey, the author touches upon more esoteric topics such as quaternions, octonions, Grassmann algebra, Barrycentric coordinates, transfinite sets and prime numbers. John Vince describes a range of mathematical topics to provide a solid foundation for an undergraduate course in computer science, starting with a review of number systems and their relevance to digital computers, and finishing with differential and integral calculus. Readers will find that the author's visual approach will greatly improve their understanding as to why certain mathematical structures exist, together with how they are used in real-world applications. This second edition includes new, full-colour illustrations to clarify the mathematical descriptions, and in some cases, equations are also coloured to reveal vital algebraic patterns. The numerous worked examples will help consolidate the understanding of abstract mathematical concepts. Whether you intend to pursue a career in programming, scientific visualisation, artificial intelligence, systems design, or real-time computing, you should find the author's literary style refreshingly lucid and engaging, and prepare you for more advanced texts.

This book constitutes the refereed post-proceedings of the Second International Conference on Theoretical and Mathematical Foundations of Computer Science, ICTMF 2011, held in Singapore in May 2011. The conference was held together with the Second International Conference on High Performance Networking, Computing, and Communication systems, ICHCC 2011, which proceedings are published in CCIS 163. The 84 revised selected papers presented were carefully reviewed and selected for inclusion in the book. The topics covered range from computational science, engineering and technology to digital signal processing, and computational biology to game theory, and other related topices.

This volume contains the papers presented at the 29th Symposium on Mat- matical Foundations of Computer Science, MFCS 2004, held in Prague, Czech Republic, August 22–27, 2004. The conference was organized by the Institute for Theoretical Computer Science (ITI) and the Department of Theoretical Com-
terScienceandMathematicalLogic(KTIML)oftheFacultyofMathematicsand Physics of Charles University in Prague. It was supported in part by the Eu- pean Association for Theoretical Computer Science (EATCS) and the European Research Consortium for Informatics and Mathematics (ERCIM). Traditionally, the MFCS symposia encourage high-quality research in all branches of theoretical computer science. Ranging in scope from automata, f- mal languages, data structures, algorithms and computational geometry to c-
plexitytheory,modelsofcomputation,andapplicationsincludingcomputational biology, cryptography, security and arti?cial intelligence, the conference o?ers a unique opportunity to researchers from diverse areas to meet and present their results to a general audience. The scienti?c program of this year's MFCS took place in the lecture halls of the recently reconstructed building of the Faculty of Mathematics and P- sics in the historical center of Prague, with the famous Prague Castle and other celebratedhistoricalmonumentsinsight.Theviewfromthewindowswasach-
lengingcompetitionforthespeakersinthe?ghtfortheattentionoftheaudience. But we did not fear the result: Due to the unusually tough competition for this year's MFCS, the admitted presentations certainly attracted considerable in- rest. The conference program (and the proceedings) consisted of 60 contributed papers selected by the Program Committee from a total of 167 submissions.

31st International Symposium, MFCS 2006, Star á Lesn á , Slovakia, August 28-September 1, 2006, Proceedings

Mathematical Foundations of Computer Science 1977

37th International Symposium, MFCS 2012, Bratislava, Slovakia, August 27-31, 2012, Proceedings

Mathematical Foundations of Computer Science 1995

A Visual Approach

5th Symposium at Gdansk, Sept. 6-10, 1976. Proceedings

Mathematical Foundations of Computer Science 2000

This book constitutes the refereed proceedings of the 31st International Symposium on Mathematical Foundations of Computer Science, MFCS 2006. The book presents 62 revised full papers together with the full papers or abstracts of 7 invited talks. All current aspects in theoretical computer science and its mathematical foundations are addressed, from algorithms and data structures, to complexity, automata, semantics, logic, formal specifications, models of computation, concurrency theory, computational geometry and more.

This volume constitutes the refereed proceedings of the 36th International Symposium on Mathematical Foundations of Computer Science, MFCS 2011, held in Warsaw, Poland, in August 2011. The 48 revised full papers presented together with 6 invited talks were carefully reviewed and selected from 129 submissions. Topics covered include algorithmic game theory, algorithmic learning theory, algorithms and data structures, automata, grammars and formal languages, bioinformatics, complexity, computational geometry, computer-assisted reasoning, concurrency theory, cryptography and security, databases and knowledge-based systems, formal specifications and program development, foundations of computing, logic in computer science, mobile computing, models of computation, networks, parallel and distributed computing, quantum computing, semantics and verification of programs, and theoretical issues in artificial intelligence.

This two volume set LNCS 9234 and 9235 constitutes the refereed conference proceedings of the 40th International Symposium on Mathematical Foundations of Computer Science, MFCS 2015, held in Milan, Italy, in August 2015. The 82 revised full papers presented together with 5 invited talks were carefully selected from 201 submissions. The papers feature high-quality research in all branches of theoretical computer science. They have been organized in the following topical main sections: logic, semantics, automata, and theory of programming (volume 1) and algorithms, complexity, and games (volume 2).

36th International Symposium, MFCS 2011, Warsaw, Poland, August 22-26, 2011, Proceedings

Mathematical Foundations of Computer Science 1988

30th International Symposium, MFCS 2005, Gdansk, Poland, August29-September 2. 2005, Proceedings

13th Symposium Carlsbad, Czechoslovakia, August 29 - September 2, 1988. Proceedings

10th Symposium Strbske Pleso, Czechoslovakia, August 31- September 4, 1981. Proceedings

Mathematical Foundations of Computer Science 2004

Mathematical Foundations of Computer Science 1981

This volume contains 11 invited lectures and 42 communications presented at the 13th Conference on Mathematical Foundations of Computer Science, MFCS '88, held at Carlsbad, Czechoslovakia, August 29 - September 2, 1988. Most of the papers present material from the following four fields: - complexity theory, in particular structural complexity, - concurrency and parellelism, - formal language theory, - semantics. Other areas treated in the proceedings include functional programming, inductive syntactical synthesis, unification algorithms, relational databases and incremental attribute evaluation.

This book constitutes the refereed proceedings of the 27th International Symposium on Mathematical Foundations of Computer Science, MFCS 2002, held in Warsaw, Poland in August 2002. The 48 revised full papers presented together with 5 invited papers were carefully reviewed and selected from 108 submissions. All relevant aspects of theoretical computer science are addressed, ranging from discrete mathematics, combinatorial optimization, graph theory, algorithms, and complexity to programming theory, formal methods, and mathematical logic.

This volume constitutes the refereed proceedings of the 35th International Symposium on Mathematical Foundations of Computer Science, MFCS 2010, held in Brno, Czech Republic, in August 2010. The 56 revised full papers presented together with 5 invited talks were carefully reviewed and selected from 149 submissions. Topics covered include algorithmic game theory, algorithmic learning theory, algorithms and data structures, automata, grammars and formal languages, bioinformatics, complexity, computational geometry, computer-assisted reasoning, concurrency theory, cryptography and security, databases and knowledge-based systems, formal specifications and program development, foundations of computing, logic in computer science, mobile computing, models of computation, networks, parallel and distributed computing, quantum computing, semantics and verification of programs, and theoretical issues in artificial intelligence.

Mathematical Foundations of Computer Science 2010

Mathematical Foundations of Computer Science 1976

Second International Conference, ICTMF 2011, Singapore, May 5-6, 2011, Revised Selected Papers

Mathematische Grundlagen der Quantenmechanik

35th International Symposium, MFCS 2010, Brno, Czech Republic, August 23-27, 2010, Proceedings

Concrete Mathematics

Mathematical Foundations of Computer Science 2005

This book constitutes the refereed proceedings of the 21st International Symposium on Mathematical Foundations of Computer Science, MFCS '96, held in Crakow, Poland in September 1996. The volume presents 35 revised full papers selected from a total of 95 submissions together with 8 invited papers and 2 abstracts of invited talks. The papers included cover issues from the whole area of theoretical computer science, with a certain emphasis on mathematical and logical foundations. The 10 invited presentations are of particular value.

This volume constitutes the refereed proceedings of the 37th International Symposium on Mathematical Foundations of Computer Science, MFCS 2012, held in Bratislava, Slovakia, in August 2012. The 63 revised full papers presented together with 8 invited talks were carefully reviewed and selected from 162 submissions. Topics covered include algorithmic game theory, algorithmic learning theory, algorithms and data structures, automata, formal languages, bioinformatics, complexity, computational geometry, computer-assisted reasoning, concurrency theory, databases and knowledge-based systems, foundations of computing, logic in computer science, models of computation, semantics and verification of programs, and theoretical issues in artificial intelligence.

This two volume set LNCS 8634 and LNCS 8635 constitutes the refereed conference proceedings of the 39th International Symposium on Mathematical Foundations of Computer Science, MFCS 2014, held in Budapest, Hungary, in August 2014. The 95 revised full papers presented together with 6 invited talks were carefully selected from 270 submissions. The focus of the conference was on following topics: Logic, Semantics, Automata, Theory of Programming, Algorithms, Complexity, Parallel and Distributed Computing, Quantum Computing, Automata, Grammars and Formal Languages, Combinatorics on Words, Trees and Games.

MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

7th Symposium Zakopane, Poland, September 4-8, 1978. Proceedings

Mathematical Foundations of Computer Science 2015

Mathematical Foundations of Computer Science 1986

39th International Symposium, MFCS 2014, Budapest, Hungary, August 26-29, 2014. Proceedings, Part II

Mathematical Foundations of Computer Science 2001

A Foundation for Computer Science

This book, updated and improved, introduces the mathematics that support advanced computer programming and the analysis of algorithms. The book's primary aim is to provide a solid and relevant base of mathematical skills. It is an indispensable text and reference for computer scientists and serious programmers in virtually every discipline.

This book constitutes the refereed proceedings of the 33rd International Symposium on Mathematical Foundations of Computer Science, MFCS 2008, held in Torun, Poland, in August 2008. The 45 revised full papers presented together with 5 invited lectures were carefully reviewed and selected from 119 submissions. All current aspects in theoretical computer science and its mathematical foundations are addressed, ranging from algorithmic game theory, algorithms and data structures, artificial intelligence, automata and formal languages, bioinformatics, complexity, concurrency and petrinets, cryptography and security, logic and formal specifications, models of computations, parallel and distributed computing, semantics and verification.

Mathematical Foundations of Computer Science