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Operations Research and Enterprise Systems Monthly Weather Review Computer Aided and Integrated Manufacturing Systems Piezoelectric MEMS Applications of Evolutionary Computation Problems in Operation Research (Principles & Solution) Transactions on Petri Nets and Other Models of Concurrency VI Mathematical and Quantum Aspects of Relativity and Cosmology Computer Aided Systems Theory - EUROCAST 2007 Weakly Connected Neural Networks Problems and Solutions in Mathematical Finance, Volume 2 Numerical Solution of Stochastic Differential Equations with Jumps in Finance Sustainability and Automation in Smart Constructions Mechanical and Electronics Engineering III Mathematical and Numerical Modeling in Porous Media Mathematical Modeling Fluid Dynamics via Examples and Solutions Bulletin of the Chemical Society of Japan Linear Integer Programming Footprints in Micrometeorology and Ecology Natural Language Processing and Chinese Computing New Trends in Constraints Artificial Evolution Fractional Calculus Gauge Theory of Weak Decays Integrated Formal Methods Problems and Solutions in Quantum Computing and Quantum Information Algorithms and Dynamical Models for Communities and Reputation in Social Networks Nonlinearity Physics of Magnetic Thin Films Introduction to Gauge Field Theories IAG 150 Years Evolutionary Multi-Criterion Optimization Analysis of Kinetic Reaction Mechanisms Data and Applications Security XIX Collected Reprints Facilities Design Robotic Intelligence Proceedings Synchronization of Oscillators and Global Output Regulation for Rigid Body Systems

Operations Research and Enterprise Systems 2024-01-15

this book includes extended and revised versions of selected papers from the 11th and 12th editions of the international conference on operations research and enterprise systems icores 2022 and icores 2023 icores 2022 was held as a virtual event in february 2022 and icores 2023 was held in lisbon portugal in february 2023 the 5 full papers included in this book were carefully reviewed and selected from the 55 submissions for icores 2022 and 8 full papers were reviewed and selected from the 55 submissions for icores 2023 the papers are focused on operations research and enterprise systems

Monthly Weather Review *2007*

this is an invaluable five volume reference on the very broad and highly significant subject of computer aided and integrated manufacturing systems it is a set of distinctly titled and well harmonized volumes by leading experts on the international scene the techniques and technologies used in computer aided and integrated manufacturing systems have produced and will no doubt continue to produce major annual improvements in productivity which is defined as the goods and services produced from each hour of work this publication deals particularly with more effective utilization of labor and capital especially information technology systems together the five volumes treat comprehensively the major techniques and technologies that are involved

Computer Aided and Integrated Manufacturing Systems *2003-10-06*

this book is a printed edition of the special issue piezoelectric mems that was published in micromachines

Piezoelectric MEMS *2018-07-10*

this book constitutes the refereed proceedings of the international conference on the applications of evolutionary computation evoapplications 2011 held in torino italy in april 2011 colocated with the evo 2011 events thanks to the large number of submissions received the proceedings for evoapplications 2011 are divided across two volumes lncs 6624 and 6625 the present volume contains contributions for evocomnet evofin evoihot evomusart evostim and evotransloc the 51 revised full papers presented were carefully reviewed and selected from numerous submissions this volume presents an overview about the latest research in ec areas where evolutionary computation techniques have been applied range from telecommunication networks to complex systems finance and economics games image analysis evolutionary music and art parameter optimization scheduling and logistics these papers may provide guidelines to help new researchers tackling their own problem using ec

Applications of Evolutionary Computation 2011-04-19

we take great pleasure in presenting to the readers the second throughly revised edition of the book after a number of reprints the suggestions received from the readers have been carefully incorporated in this edition and almost the entire subject matter has been reorganised revised and rewritten

Problems in Operation Research (Principles & Solution) 1991

these transactions publish archival papers in the broad area of petri nets and other models of concurrency ranging from theoretical work to tool support and industrial applications topnoc issues are published as lncs volumes and hence are widely distributed and indexed this journal has its own editorial board which selects papers based on a rigorous two stage refereeing process topnoc contains revised versions of a selection of the best papers from workshops and tutorials at the annual petri net conferences special sections issues within particular subareas similar to those published in the advances in petri nets series other papers invited for publication in topnoc papers submitted directly to topnoc by their authors the sixth volume of topnoc includes revised versions of selected papers from workshops and tutorials held at the 32nd international conference on application and theory of petri nets and concurrency it also contains a special section on networks protocols and services as well as a contributed paper submitted through the regular submission track of topnoc the 14 papers cover a diverse range of topics including model checking and system verification synthesis foundational work on specific classes of petri nets and innovative applications of petri nets and other models of concurrency thus this volume gives a good view of ongoing concurrent systems and petri nets research

Transactions on Petri Nets and Other Models of Concurrency VI *2012-11-14*

this book is written in a pedagogical style intelligible for graduate students it reviews recent progress in black hole and wormhole theory and in mathematical cosmology within the framework of einstein s field equations and beyond including quantum effects this collection of essays written by leading scientists of long standing reputation should become an indispensable source for future research

Mathematical and Quantum Aspects of Relativity and Cosmology *2008-01-11*

this book constitutes the thoroughly refereed post proceedings of the 11th international conference on computer aided systems theory eurocast 2007 coverage in the 144 revised full papers presented includes formal approaches computation and simulation in modeling biological systems intelligent information processing heuristic problem solving signal processing architectures robotics and robotic soccer cybercars and intelligent vehicles and artificial intelligence components

Computer Aided Systems Theory - EUROCAST 2007 *2007-11-16*

devoted to local and global analysis of weakly connected systems with applications to neurosciences this book uses bifurcation theory and canonical models as the major tools of analysis it presents a systematic and well motivated development of both weakly connected system theory and mathematical neuroscience addressing bifurcations in neuron and brain dynamics synaptic organisations of the brain and the nature of neural codes the authors present classical results together with the most recent developments in the field making this a useful reference for researchers and graduate students in various branches of mathematical neuroscience

Weakly Connected Neural Networks *2012-12-06*

detailed guidance on the mathematics behind equity derivatives problems and solutions in mathematical finance volume ii is an innovative reference for quantitative practitioners and students providing guidance through a range of mathematical problems encountered in the finance industry this volume focuses solely on equity derivatives problems beginning with basic problems in derivatives securities before moving on to more advanced applications including the construction of volatility surfaces to price exotic options by providing a methodology for solving theoretical and practical problems whilst explaining the limitations of financial models this book helps readers to develop the skills they need to advance their careers the text covers a wide range of derivatives pricing such as european american asian barrier and other exotic options extensive appendices provide a summary of important formulae from calculus theory of probability and differential equations for the convenience of readers as volume ii of the four volume problems and solutions in mathematical finance series this book provides clear explanation of the mathematics behind equity derivatives in order to help readers gain a deeper understanding of their mechanics and a firmer grasp of the calculations review the fundamentals of equity derivatives work through problems from basic securities to advanced exotics pricing examine numerical methods and detailed derivations of closed form solutions utilise formulae for probability differential equations and more mathematical finance relies on mathematical models numerical methods computational algorithms and simulations to make trading hedging and investment decisions for the practitioners and graduate students of quantitative finance problems and solutions in mathematical finance volume ii provides essential guidance principally towards the subject of equity derivatives

Problems and Solutions in Mathematical Finance, Volume 2 *2017-03-13*

in financial and actuarial modeling and other areas of application stochastic differential equations with jumps have been employed to describe the dynamics of various state variables the numerical solution of such equations is more complex than that of those only driven by wiener processes described in kloeden platen numerical solution of stochastic differential equations 1992 the present monograph builds on the above mentioned work and provides an introduction to stochastic differential equations with jumps in both theory and application emphasizing the numerical methods needed to solve such equations it presents many new results on higher

order methods for scenario and monte carlo simulation including implicit predictor corrector extrapolation markov chain and variance reduction methods stressing the importance of their numerical stability furthermore it includes chapters on exact simulation estimation and filtering besides serving as a basic text on quantitative methods it offers ready access to a large number of potential research problems in an area that is widely applicable and rapidly expanding finance is chosen as the area of application because much of the recent research on stochastic numerical methods has been driven by challenges in quantitative finance moreover the volume introduces readers to the modern benchmark approach that provides a general framework for modeling in finance and insurance beyond the standard risk neutral approach it requires undergraduate background in mathematical or quantitative methods is accessible to a broad readership including those who are only seeking numerical recipes and includes exercises that help the reader develop a deeper understanding of the underlying mathematics

Numerical Solution of Stochastic Differential Equations with Jumps in Finance *2010-07-23*

this book gathers outstanding papers presented at the conference on automation innovation in construction ciac 2019 in recent years there have been significant transformations in the construction sector regarding production and the use of computers and automation to create smart and autonomous systems at the same time innovative construction materials and alternative technologies are crucial to overcoming the challenges currently facing the building materials industry the book presents numerous examples of smart construction technologies discusses the applications of new construction materials and technologies and includes studies on recent trends in automation as applied to the construction sector

Sustainability and Automation in Smart Constructions *2020-09-14*

volume is indexed by thomson reuters cpci s wos these peer reviewed proceedings comprise the papers presented at a conference whose main theme was mechanical and electronics engineering the main goal of the event was to provide an international scientific forum for the exchange of new ideas in a number of fields and for in depth interaction via discussions with peers from around the world core areas of information and network technology plus multidisciplinary interdisciplinary and applied aspects were covered

Mechanical and Electronics Engineering III *2011-10-27*

porous media are broadly found in nature and their study is of high relevance in our present lives in geosciences porous media research is fundamental in applications to aquifers mineral mines contaminant transport soil remediation waste storage oil recovery and geothermal energy deposits despite their importance there is as yet no complete understanding of the physical processes involved in fluid flow and transport this fact can be attributed to the complexity of the phenomena which include multicomponent fluids multiphasic

flow and rock fluid interactions since its formulation in 1856 darcy s law has been generalized to describe multi phase compressible fluid flow through anisotropic and heterogeneous porous and fractured rocks due to the scarcity of information a high degree of uncertainty on the porous medium properties is commonly present contributions to the knowledge of modeling flow and transport as well as to the characterization of porous media at field scale are of great relevance this book addresses several of these issues treated with a variety of methodologies grouped into four parts i fundamental concepts ii flow and transport iii statistical and stochastic characterization iv waves the problems analyzed in this book cover diverse length scales that range from small rock samples to field size porous formations they belong to the most active areas of research in porous media with applications in geosciences developed by diverse authors this book was written for a broad audience with a prior and basic knowledge of porous media the book is addressed to a wide readership and it will be useful not only as an authoritative textbook for undergraduate and graduate students but also as a reference source for professionals including geoscientists hydrogeologists geophysicists engineers applied mathematicians and others working on porous media

Mathematical and Numerical Modeling in Porous Media *2012-07-24*

this book provides qualitative and quantitative methods to analyze and better understand phenomena that change in space and time an innovative approach is to incorporate ideas and methods from dynamical systems and equivariant bifurcation theory to model analyze and predict the behavior of mathematical models in addition real life data is incorporated in the derivation of certain models for instance the model for a fluxgate magnetometer includes experiments in support of the model the book is intended for interdisciplinary scientists in stem fields who might be interested in learning the skills to derive a mathematical representation for explaining the evolution of a real system overall the book could be adapted in undergraduate and postgraduate level courses with students from various stem fields including mathematics physics engineering and biology

<u>Mathematical Modeling</u> *2022-09-19*

fluid dynamics via examples and solutions provides a substantial set of example problems and detailed model solutions covering various phenomena and effects in fluids the book is ideal as a supplement or exam review for undergraduate and graduate courses in fluid dynamics continuum mechanics turbulence ocean and atmospheric sciences and related areas it is also suitable as a main text for fluid dynamics courses with an emphasis on learning by example and as a self study resource for practicing scientists who need to learn the basics of fluid dynamics the author covers several sub areas of fluid dynamics types of flows and applications he also includes supplementary theoretical material when necessary each chapter presents the background an extended list of references for further reading numerous problems and a complete set of model solutions

Fluid Dynamics via Examples and Solutions *2014-12-01*

this book presents the state of the art methods in linear integer programming including some new algorithms and heuristic methods developed by the authors in recent years topics as characteristic equation ce application of ce to bi objective and multi objective problems binary integer problems mixed integer models knapsack models complexity reduction feasible space reduction random search connected graph are also treated

Bulletin of the Chemical Society of Japan 1981

how to interpret meteorological measurements made at a given level over a surface with regard to characteristic properties such as roughness albedo heat moisture carbon dioxide and other gases is an old question which goes back to the very beginnings of modern micrometeorology it is made even more challenging when it is unclear whether these measurements are only valid for this point region and precisely describe the conditions there or if they are also influenced by surrounding areas after 50 years of field experiments it has become both apparent and problematic that meteorological measurements are influenced from surfaces on the windward side as such extending these measurements for inhomogeneous experimental sites requires a quantitative understanding of these influences when combined with atmospheric transport models similar to air pollution models the footprint concept a fundamental approach introduced roughly 20 years ago provides us with information on whether or not the condition of upwind site homogeneity is fulfilled since these first models the development of more scientifically based versions validation experiments and applications has advanced rapidly the aim of this book is to provide an overview of these developments to analyze present deficits to describe applications and to advance this topic at the forefront of micrometeorological research

Linear Integer Programming *2021-12-06*

this three volume set constitutes the refereed proceedings of the 12th national ccf conference on natural language processing and chinese computing nlpcc 2023 held in foshan china during october 12 15 2023 the regular papers included in these proceedings were carefully reviewed and selected from 478 submissions they were organized in topical sections as follows dialogue systems fundamentals of nlp information extraction and knowledge graph machine learning for nlp machine translation and multilinguality multimodality and explainability nlp applications and text mining question answering large language models summarization and generation student workshop and evaluation workshop

Footprints in Micrometeorology and Ecology *2014-06-17*

this book constitutes the thoroughly refereed post proceedings of the joint ercim compulog net workshop on new trends in constraints

held in paphos cyprus greece in october 1999 the 12 revised full research papers presented together with four surveys by leading researchers were carefully reviewed the book is divided in topical sections on constraint propagation and manipulation constraint programming and rule based constraint programming

Natural Language Processing and Chinese Computing *2023-10-07*

this book constitutes selected best papers from the 10th international conference on artificial evolution ea 2011 held in angers france in october 2011 initially 33 full papers and 10 post papers were carefully reviewed and selected from 64 submissions this book presents the 19 best papers selected from these contributions the papers are organized in topical sections on ant colony optimization multi objective optimization analysis implementation and robotics combinatorial optimization learning and parameter tuning new nature inspired models probabilistic algorithms theory and evolutionary search and applications

New Trends in Constraints *2000-08-23*

the ultimate question of elementary particle physics is what is the fundamental lagrangian of nature surrounding us the lagrangian of the sm is very successful in describing nature at the currently available energy range the discovery of the higgs boson completed the particle spectrum of the sm and it is another proof of how well the sm works nevertheless the sm cannot be the end of the story and it is for sure not the fundamental lagrangian of nature the lagrangian of the sm looses its validity at the latest at the planck scale where gravitational effects become noticeable most physicists think of the sm as an effective theory that has to be replaced by a more fundamental theory above the tev scale what the word effective really means will hopefully be clear at later stages of our book for the time being we will list some problems and open questions of the sm

Artificial Evolution 2012-11-28

this book constitutes the refereed proceedings of the 6th international conference on integrated formal methods ifm 2007 held in oxford uk it addresses all aspects of formal methods integration including of a process of analysis or design application of formal methods to analysis or design extension of one method based upon the inclusion of ideas or concepts from others and semantic integration or practical application

<u>Fractional Calculus</u> *2020-07-02*

quantum computing and quantum information are two of the fastest growing and most exciting research fields in physics the possibilities of using the non local behavior of quantum mechanics to factor integers in random polynomial time have also added to this

new interest this book supplies a collection of problems in quantum computing and quantum information together with their detailed solutions which will prove to be invaluable to students as well as to research workers in these fields all the important concepts and topics such as quantum gates and quantum circuits entanglement teleportation bell states bell inequality schmidt decomposition quantum fourier transform magic gate von neumann entropy quantum cryptography quantum error correction coherent states squeezed states povm measurement beam splitter and kerr hamilton operator are included the topics range in difficulty from elementary to advanced almost all problems are solved in detail and most of the problems are self contained

Gauge Theory of Weak Decays 2007-09-14

a persistent problem when finding communities in large complex networks is the so called resolution limit this thesis addresses this issue meticulously and introduces the important notion of resolution limit free remarkably only few methods possess this desirable property and this thesis puts forward one such method moreover it discusses how to assess whether communities can occur by chance or not one aspect that is often ignored in this field is treated here links can also be negative as in war or conflict besides how to incorporate this in community detection it also examines the dynamics of such negative links inspired by a sociological theory known as social balance this has intriguing connections to the evolution of cooperation suggesting that for cooperation to emerge groups often split in two opposing factions in addition to these theoretical contributions the thesis also contains an empirical analysis of the effect of trading communities on international conflict and how communities form in a citation network with positive and negative links

Integrated Formal Methods 2006-03-22

this book is for graduate students and researchers who wish to understand theoretical mechanisms lying behind macroscopic properties of magnetic thin films it provides a detailed description of basic theoretical methods and techniques of simulation to help readers in their research projects the first part of the book contains 6 chapters chapters 1 to 5 focus on the fundamental theory of bulk magnetic materials chapter 6 is devoted to the presentation of the monte carlo simulation methods exercises and problems are provided at the end of each of these chapters for self training the second part contains 11 chapters devoted to the main topic of the book namely physics of magnetic thin films theory and simulation written as a research paper each chapter focuses on a subject and also presents the state of the art literature on the subject and the motivation of the chapter a detailed description of the techniques and the presentation of the results are then shown with discussion

Problems and Solutions in Quantum Computing and Quantum Information

2014-05-28

in recent years gauge fields have attracted much attention in elementary par ticle physics the reason is that great progress has been achieved in solving a number of important problems of field theory and elementary particle physics by means of the quantum theory of gauge fields this refers in particular to constructing unified gauge models and theory of strong interactions between the elementary particles this book expounds the fundamentals of the quantum theory of gauge fields and its application for constructing unified gauge models and the theory of strong interactions in writing the book the authors aim was three fold firstly to outline the basic ideas underlying the unified gauge models and the theory of strong inter actions secondly to discuss the major unified gauge models the theory of strong interactions and their experimental implications and thirdly to acquaint the reader with a rather special mathematical approach path in tegral method which has proved to be well suited for constructing the quantum theory of gauge fields gauge fields are a vigorously developing area in this book we have select ed for presentation the more or less traditional and commonly accepted mate rial there also exist a number of different approaches which are presently being developed the most important of them are touched upon in the conclusion

Algorithms and Dynamical Models for Communities and Reputation in Social Networks *1999-07*

this proceedings contains a selection of peer reviewed papers presented at the iag scientific assembly postdam germany 1 6 september 2013 the scientific sessions were focussed on the definition implementation and scientific applications of reference frames gravity field determination and applications the observation and assessment of earth hazards it presents a collection of the contributions on the applications of earth rotations dynamics on observation systems and services as well as on imaging and positioning techniques and its applications

<u>Nonlinearity</u> *2021-04-28*

this book constitutes the refereed proceedings of the 12th international conference on evolutionary multi criterion optimization emo 2022 held in leiden the netherlands during march 20 24 2023 the 44 regular papers presented in this book were carefully reviewed and selected from 65 submissions the papers are divided into the following topical sections algorithm design and engineering machine learning and multi criterion optimization benchmarking and performance assessment indicator design and complexity analysis applications in real world domains and multi criteria decision making and interactive algorithms

Physics of Magnetic Thin Films *2012-12-06*

chemical processes in many fields of science and technology including combustion atmospheric chemistry environmental modelling process engineering and systems biology can be described by detailed reaction mechanisms consisting of numerous reaction steps this book describes methods for the analysis of reaction mechanisms that are applicable in all these fields topics addressed include how sensitivity and uncertainty analyses allow the calculation of the overall uncertainty of simulation results and the identification of the most important input parameters the ways in which mechanisms can be reduced without losing important kinetic and dynamic detail and the application of reduced models for more accurate engineering optimizations this monograph is invaluable for researchers and engineers dealing with detailed reaction mechanisms but is also useful for graduate students of related courses in chemistry mechanical engineering energy and environmental science and biology

Introduction to Gauge Field Theories *2016-08-08*

this book constitutes the refereed proceedings of the 19th annual working conference on data and applications security held in storrs ct usa in august 2005 the 24 revised full papers presented together with an invited lecture were thoroughly reviewed and selected from 54 submissions the papers present theory technique applications and practical experience of data and application security with topics like cryptography privacy security planning and administration secure information integration secure semantic technologies and applications access control integrity maintenance knowledge discovery and privacy concurrency control fault tolerance and recovery methods

IAG 150 Years *2023-03-09*

dedicated to the proper design layout and location of facilities this definitive textbook outlines the main design and operational problems that occur in manufacturing and service systems explains the significance of facility design and planning problems and describes how mathematical models can be used to help analyze and solve them combining theory with practice this revised textbook presents state of the art topics in materials handling warehousing and logistics along with real world examples that emphasize the importance of modeling and analysis when determining a solution to complex facility design problems facilities design fifth edition includes a balanced coverage of modeling as well as applications of layout materials handling and warehousing it presents automated materials handling along with queuing queuing networks and basic simulation modeling the new edition introduces new material that includes topics such as supply chain designing and management aggregate planning and transportation logistics and distribution the new edition will continue to provide access to available software and data files as well as powerpoint slides from the author s own website facilitiesdesign us a solutions manual and figure slides are available for qualified textbooks adoptions the book addresses facilities design and layout problems in manufacturing systems and covers layout logistics supply chain aggregate planning

warehousing and materials handling the new edition continues to explain the ins and outs of facility planning and design and is an ideal textbook for students and a reference for professionals

Evolutionary Multi-Criterion Optimization 2014-12-29

this volume aims to provide a reference to the development of robotic intelligence built upon semantic computing in terms of action to realize the context and intention formulated by semantics computing during the thinking or reasoning process it addresses three core areas

Analysis of Kinetic Reaction Mechanisms 2005-07-20

the investigation of nonlinear dynamis in physical and engineering systems from the point of view of systems and control theory is important to develop better engineering systems synchronization of oscillators and output regulation for rigid body systems are two problem classes which are inherently nonlinear and are of great importance in applications this thesis contains novel results for both problem classes in the case of sychronization of oscillators we consider two different system classes and give sufficient or necessary conditions for synchronization in the case of the output regulation problems for rigid body systems we provide a new two step control design procedure a detailed analysis for the error dynamics and an application scenario for satellite control a highlight of the thesis is a new separation principle which is the underlying principle of the two step design procedure for the output regulation problem

Data and Applications Security XIX *1977*

Collected Reprints *2022-07-14*

Facilities Design 2019-03-06

Robotic Intelligence *1975*

Proceedings *2014*

Synchronization of Oscillators and Global Output Regulation for Rigid Body Systems

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