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Lecture Notes in Computational Intelligence and Decision Making Lecture Notes in Computational Intelligence and Decision Making Lecture Notes on Computational Structural Biology Lecture Notes in Computational Intelligence and Decision Making Notes from the International Autumn School on Computational Number Theory Lecture Notes on Computational Mutation Lecture Notes in Computational Intelligence and Decision Making Lecture Notes in Computational Intelligence and Decision Making Computational Mathematics, Numerical Analysis and Applications Computational Biology of Cancer A Computational Logic Handbook Computational Geometry and Its Applications Lecture Notes in Computational Intelligence and Decision Making Notes on Computational Fluid Dynamics Error Estimation and Adaptive Discretization Methods in Computational Fluid Dynamics Computational Music Analysis Lecture Notes in Data Engineering, Computational Intelligence, and Decision Making LECTURE NOTES on PHS 473: COMPUTATIONAL PHYSICS Multiscale Methods in Computational Mechanics Computational Quantum Mechanics Computational Nanoscience: Do it Yourself! Computational Auditory Scene Analysis Computational Logic Course notes for a Tutorial on Computational Semantics Computational statistical physics Computational Many-Particle Physics Computational Analysis and Deep Learning for Medical Care Energy of the Future Computational Science – ICCS 2020 Computational Number Theory and Modern Cryptography Advances in Computational Collective Intelligence Computational Science and Its Applications - ICCSA 2006 Computational and Information Science A Mosaic of Computational Topics: from Classical to Novel Recent Advances in Computational and Experimental Mechanics, Vol II Computational Vision and Bio-Inspired Computing Computational Intelligence in Remanufacturing Computational Linguistics and Intelligent Text Processing Computational Science - ICCS 2007 Computational Intelligence Techniques for Bioprocess Modelling, Supervision and Control

Lecture Notes in Computational Intelligence and Decision Making

2021-07-22

this book is devoted to current problems of artificial and computational intelligence including decision making systems collecting analysis and processing information are the current directions of modern computer science development of new modern information and computer technologies for data analysis and processing in various fields of data mining and machine learning creates the conditions for increasing effectiveness of the information processing by both the decrease of time and the increase of accuracy of the data processing the book contains of 54 science papers which include the results of research concerning the current directions in the fields of data mining machine learning and decision making the papers are divided in terms of their topic into three sections the first section analysis and modeling of complex systems and processes contains of 26 papers and the second section theoretical and applied aspects of decision making systems contains of 13 papers there are 15 papers in the third section computational intelligence and inductive modeling the book is focused to scientists and developers in the fields of data mining machine learning and decision making systems

Lecture Notes in Computational Intelligence and Decision Making

2020-07-25

this book includes 46 scientific papers presented at the conference and reflecting the latest research in the fields of data mining machine learning and decision making the international scientific conference intellectual systems of decision making and problems of computational intelligence was held in the kherson region ukraine from may 25 to 29 2020 the papers are divided into three sections analysis and modeling of complex systems and processes theoretical and applied aspects of decision making systems and computational intelligence and inductive modeling the book will be of interest to scientists and developers specialized in the fields of data mining machine learning and decision making systems

Lecture Notes on Computational Structural Biology 2022

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Lecture Notes in Computational Intelligence and Decision Making

2019-04-17

this volume collects lecture notes and research articles from the international autumn school on computational number theory which was held at the izmir institute of technology from october 30th to november 3rd 2017 in izmir turkey written by experts in computational number theory the chapters cover a variety of the most important aspects of the field by including timely research and survey articles the text also helps pave a path to future advancements topics include modular forms l functions the modular symbols algorithm diophantine equations nullstellensatz eisenstein series notes from the international autumn school on computational number theory will offer graduate students an invaluable introduction to computational number theory in addition it provides the state of the art of the field and will thus be of interest to researchers interested in the field as well

Notes from the International Autumn School on Computational Number Theory

2008

this book introduces the computational mutation to the scientific community because there is no similar book therefore the authors use plain language to explain the rationales and methods of computational mutation including examples tables and figures currently the human s ability in collection of data far more outpaces the human s ability to deal with data successfully therefore future efforts in the scientific community will be more focused on manipulation and elaboration of obtained data

Lecture Notes on Computational Mutation 2020

information and computer technologies for data analysis and processing in various fields of data mining and machine learning generates the conditions for increasing the effectiveness of information processing by making it faster and more accurate the book includes 49 scientific papers presenting the latest research in the fields of data mining machine learning and decision making divided into three sections analysis and modeling of complex systems and processes theoretical and applied aspects of decision making systems and computational intelligence and inductive modeling the book is of interest to scientists and developers in the field

Lecture Notes in Computational Intelligence and Decision Making 2021

this book includes 46 scientific papers presented at the conference and reflecting the latest research in the fields of data mining machine learning and decision making the international scientific conference intellectual systems of decision making and problems of computational intelligence was held in the kherson region ukraine from may 25 to 29 2020 the papers are divided into three sections analysis and modeling of complex systems and processes theoretical and applied aspects of decision making systems and computational intelligence and inductive modeling the book will be of interest to scientists and developers specialized in the fields of data mining machine learning and decision making systems

Lecture Notes in Computational Intelligence and Decision Making

2017-08-03

the first part of this volume gathers the lecture notes of the courses of the xvii escuela hispano francesa held in gijón spain in june 2016 each chapter is devoted to an advanced topic and presents state of the art research in a didactic and self contained way young researchers will find a complete guide to beginning advanced work in fields such as high performance computing numerical linear algebra optimal control of partial differential equations and quantum mechanics simulation while experts in these areas will find a comprehensive reference guide including some previously unpublished results and teachers may find these chapters useful as textbooks in graduate courses the second part features the extended abstracts of selected research work presented by the students during the school it highlights new results and applications in computational algebra fluid mechanics chemical kinetics and biomedicine among others offering interested researchers a convenient reference guide to these latest advances

Computational Mathematics, Numerical Analysis and Applications 2005

provides an introduction to computational methods in cancer biology follows a multi disciplinary approach

Computational Biology of Cancer 2014-05-10

perspectives in computing a computational logic handbook contains a precise description of the logic and a detailed reference guide to the associated mechanical theorem proving system including a primer for the logic as a functional programming language an introduction to proofs in the logic and a primer for the mechanical theorem the publication first offers information on a primer for the logic formalization within the logic and a precise description of the logic discussions focus on induction and recursion quantification explicit value terms dealing with features and omissions elementary mathematical relationships boolean operators and conventional data structures the text then takes a look at proving theorems in the logic mechanized proofs in the logic and an introduction to the system the text examines the processes involved in using the theorem prover four classes of rules generated from lemmas and aborting or interrupting commands topics include executable counterparts toggle elimination of irrelevancy heuristic use of equalities representation of formulas type sets and the crucial check points in a proof attempt the publication is a vital reference for researchers interested in computational logic

A Computational Logic Handbook 1988-10-12

the international workshop cg 88 on computational geometry was held at the university of würzburg frg march 24 25 1988 as the interest in the fascinating field of computational geometry and its applications has grown very quickly in recent years the organizers felt the need to have a workshop where a suitable number of invited participants could concentrate their efforts in this field to cover a broad spectrum of topics and to communicate in a stimulating atmosphere this workshop was attended by some fifty invited scientists the scientific program consisted of 22 contributions of which 18 papers with one additional paper m reichling are contained in the present volume the contributions covered important areas not only of fundamental aspects of computational geometry but a lot of interesting and most promising applications algorithmic aspects of geometry arrangements nearest neighbor problems and abstract voronoi diagrams data structures for geometric objects geo relational algebra geometric modeling clustering and visualizing geometric objects finite element methods triangulating in parallel animation and ray tracing robotics motion planning collision avoidance visibility smooth surfaces basic models of geometric computations automatizing geometric proofs and constructions

Computational Geometry and Its Applications 2019-07-23

information and computer technologies for data analysis and processing in various fields of data mining and machine learning generates the conditions for increasing the effectiveness of information processing by making it faster and more accurate the book includes 49 scientific papers presenting the latest research in the fields of data mining machine learning and decision making divided into three sections analysis and modeling of complex systems and processes theoretical and applied aspects of decision making systems and computational intelligence and inductive modeling the book is of interest to scientists and developers in the field

Lecture Notes in Computational Intelligence and Decision Making 2022-04

as computational fluid dynamics cfd is applied to ever more demanding fluid flow problems the ability to compute numerical fluid flow solutions to a user specified tolerance as well as the ability to quantify the accuracy of an existing numerical solution are seen as essential ingredients in robust numerical simulation although the task of accurate error estimation for the nonlinear equations of cfd seems a daunting problem considerable effort has centered on this challenge in recent years with notable progress being made by the use of advanced error estimation techniques and adaptive discretization methods to address this important topic a special course was jointly organized by the nato research and technology office rto the von karman institute for fluid dynamics and the nasa ames research center the nato rto sponsored course entitled error estimation and solution adaptive discretization in cfd was held september 10 14 2002 at the nasa ames research center and october 15 19 2002 at the von karman institute in belgium during the special course a series of comprehensive lectures by leading experts discussed recent advances and technical progress in the area of numerical error estimation and adaptive discretization methods with specific emphasis on computational fluid dynamics the lecture notes provided in this volume are derived from the special course material the volume consists of 6 articles prepared by the special course lecturers

Notes on Computational Fluid Dynamics 2013-04-17

this book provides an in depth introduction and overview of current research in computational music analysis its seventeen chapters written by leading researchers collectively represent the diversity as well as the technical and philosophical sophistication of the work being done today in this intensely interdisciplinary field a broad range of approaches are presented employing techniques originating in disciplines such as linguistics information theory information retrieval pattern recognition machine learning topology algebra and signal processing many of the methods described draw on well established theories in music theory and analysis such as forte's pitch class set theory schenkerian analysis the methods of semiotic analysis developed by ruwet and nattiez and lerdaahl and jackendoff's generative theory of tonal music the book is divided into six parts covering methodological issues harmonic and pitch class set analysis form and voice separation grammars and hierarchical reduction motivic analysis and pattern discovery and finally classification and the discovery of distinctive patterns as a detailed and up to date picture of current research in computational music analysis the book provides an invaluable resource for researchers teachers and students in music theory and analysis computer science music information retrieval and related disciplines it also provides a state of the art reference for practitioners in the music technology industry

Error Estimation and Adaptive Discretization Methods in Computational Fluid Dynamics 2015-10-27

this book contains of 39 scientific papers which include the results of research regarding the current directions in the fields of data mining machine learning and decision making this book is devoted to current problems of artificial and computational intelligence including decision making systems collecting analysis and processing information are the current directions of modern computer science development of new modern information and computer technologies for data analysis and processing in various fields of data mining and machine learning create the conditions for increasing effectiveness of the information processing by both the decrease of time and the increase of accuracy of the data processing the papers are divided in terms of their topic into three sections the first section analysis and modeling of hybrid systems and processes contains of 11 papers and the second section theoretical and applied aspects of decision making systems contains of 11 ones too there are 17 papers in the third section data engineering computational intelligence and inductive modeling the book is focused to scientists and developers in the fields of data mining machine learning and decision making systems

Computational Music Analysis 2022-09-13

lecture notes on phs 473 computational physics by al jakes

Lecture Notes in Data Engineering, Computational Intelligence, and Decision Making 2015-01-12

this work gives a modern up to date account of recent developments in computational multiscale mechanics both upscaling and concurrent computing methodologies will be addressed for a range of application areas in computational solid and fluid mechanics scale transitions in materials turbulence in fluid structure interaction problems multiscale multilevel optimization multiscale poromechanics a dutch german research group that consists of qualified and well known researchers in the field has worked for six years on the topic of computational multiscale mechanics this text provides a unique opportunity to consolidate and disseminate the knowledge gained in this project the addition of chapters written by experts outside this working group provides a broad and multifaceted view of this rapidly evolving field

LECTURE NOTES on PHS 473: COMPUTATIONAL PHYSICS 2010-10-09

quantum mechanics undergraduate courses mostly focus on systems with known analytical solutions the finite well simple harmonic and spherical potentials however most problems in quantum mechanics cannot be solved analytically this textbook introduces the numerical techniques required to tackle problems in quantum mechanics providing numerous examples en route no programming knowledge is required an introduction to both fortran and python is included with code examples throughout with a hands on approach numerical techniques covered in this book include differentiation and integration ordinary and differential equations linear algebra and the fourier transform by completion of this book the reader will be armed to solve the schrödinger equation for arbitrarily complex potentials and for single and multi electron systems

Multiscale Methods in Computational Mechanics 2019-02-15

the interest of ai in problems related to understanding sounds has a rich history dating back to the arpa speech understanding project in the 1970s while a great deal has been learned from this and subsequent speech understanding research the goal of building systems that can understand general acoustic signals continuous speech and or non speech sounds from unconstrained environments is still unrealized instead there are now systems that understand clean speech well in relatively noiseless laboratory environments but that break down in more realistic noisier environments as seen in the cocktail party effect humans and other mammals have the ability to selectively attend to sound from a particular source even when it is mixed with other sounds computers also need to be able to decide which parts of a mixed acoustic signal are relevant to a particular purpose which part should be interpreted as speech and which should be interpreted as a door closing an air conditioner humming or another person interrupting observations such as these have led a number of researchers to conclude that research on speech understanding and on nonspeech understanding need to be united within a more general framework researchers have also begun trying to understand computational auditory frameworks as parts of larger perception systems whose purpose is to give a computer integrated information about the real world inspiration for this work ranges from research on how different sensors can be integrated to models of how humans auditory apparatus works in concert with vision proprioception etc representing some of the most advanced work on computers understanding speech this collection of papers covers the work being done to integrate speech and nonspeech understanding in computer systems

Computational Quantum Mechanics 2006

handbook of the history of logic brings to the development of logic the best in modern techniques of historical and interpretative scholarship computational logic was born in the twentieth century and evolved in close symbiosis with the advent of the first electronic computers and the growing importance of computer science informatics and artificial intelligence with more than ten thousand people working in research and development of logic and logic related methods with several dozen international conferences and several times as many workshops addressing the growing richness and diversity of the field and with the foundational role and importance these methods now assume in mathematics computer science artificial intelligence cognitive science linguistics law and many engineering fields where logic related techniques are used inter alia to state and settle correctness issues the field has diversified in ways that even the pure logicians working in the early decades of the twentieth century could have hardly anticipated logical calculi which capture an important aspect of human thought are now amenable to investigation with mathematical rigour and computational support and fertilized the early dreams of mechanised reasoning calculemus the dartmouth conference in 1956 generally considered as the birthplace of artificial intelligence raised explicitly the hopes for the new possibilities that the advent of electronic computing machinery offered logical statements could now be executed on a machine with all the far reaching consequences that ultimately led to logic programming deduction systems for mathematics and engineering logical design and verification of computer software and hardware deductive databases and software synthesis as well as logical techniques for analysis in the field of mechanical engineering this volume covers some of the main subareas of computational logic and its applications chapters by leading authorities in the field provides a forum where philosophers and scientists interact comprehensive reference source on the history of logic

Computational Nanoscience: Do it Yourself! 2021-01-31

the present book is an outcome of the serc school on computational statistical physics held at the indian institute of technology guwahati in december 2008 numerical experimentation has played an extremely important role in statistical physics in recent years lectures given at the school covered a large number of topics of current and continuing interest based on lectures by active researchers in the field bikas chakrabarti s chaplot deepak dhar sanjay kumar prabal maiti sanjay puri purusattam ray sitangshu santra and subir sarkar the nine chapters comprising the book deal with topics that range from the fundamentals of the field to problems and questions that are at the very forefront of current research this book aims to expose the graduate student to the basic as well as advanced techniques in computational statistical physics following a general introduction to statistical mechanics and critical phenomena the various chapters cover monte carlo and molecular dynamics simulation methodology along with a variety of applications these include the study of coarsening phenomena and diffusion in zeolites p in addition graphical enumeration techniques are covered in detail with applications to percolation and polymer physics and methods for optimisation are also discussed beginning graduate students and young researchers in the area of statistical physics will find the book useful in addition this will also be a valuable general reference for students and researchers in other areas of science and engineering

Computational Auditory Scene Analysis 2014-12-09

looking for the real state of play in computational many particle physics look no further this book presents an overview of state of the art numerical methods for studying interacting classical and quantum many particle systems a broad range of techniques and algorithms are covered and emphasis is placed on their implementation on modern high performance computers this excellent book comes complete with online files and updates allowing readers to stay right up to date

Computational Logic 1975

the book details deep learning models like ann rnn lstm in many industrial sectors such as transportation healthcare military agriculture with valid and effective results which will help researchers find solutions to their deep learning research problems we have entered the era of smart world devices where robots or machines are being used in most applications to solve real world problems these smart machines devices reduce the burden on doctors which in turn make their lives easier and the lives of their patients better thereby increasing patient longevity which is the ultimate goal of computer vision therefore the goal in writing this book is to attempt to provide complete information on reliable deep learning models required for e healthcare applications ways in which deep learning can enhance healthcare images or text data for making useful decisions are discussed also presented are reliable deep learning models such as neural networks convolutional neural networks backpropagation and recurrent neural networks which are increasingly being used in medical image processing including for colorization of black and white x ray images automatic machine translation images object classification in photographs images ct scans character or useful generation ecg image caption generation etc hence reliable deep learning methods for the perception or production of better results are a necessity for highly effective e healthcare applications currently the most difficult data related problem that needs to be solved concerns the rapid increase of data occurring each day via billions of smart devices to address the growing amount of data in healthcare applications challenges such as not having standard tools efficient algorithms and a sufficient number of skilled data scientists need to be overcome hence there is growing

interest in investigating deep learning models and their use in e healthcare applications audience researchers in artificial intelligence big data computer science and electronic engineering as well as industry engineers in transportation healthcare biomedicine military agriculture

Course notes for a Tutorial on Computational Semantics *2011-07-15*

the seven volume set Incs 12137 12138 12139 12140 12141 12142 and 12143 constitutes the proceedings of the 20th international conference on computational science iccs 2020 held in amsterdam the netherlands in june 2020 the total of 101 papers and 248 workshop papers presented in this book set were carefully reviewed and selected from 719 submissions 230 submissions to the main track and 489 submissions to the workshops the papers were organized in topical sections named part i iccs main track part ii iccs main track part iii advances in high performance computational earth sciences applications and frameworks agent based simulations adaptive algorithms and solvers applications of computational methods in artificial intelligence and machine learning biomedical and bioinformatics challenges for computer science part iv classifier learning from difficult data complex social systems through the lens of computational science computational health computational methods for emerging problems in dis information analysis part v computational optimization modelling and simulation computational science in iot and smart systems computer graphics image processing and artificial intelligence part vi data driven computational sciences machine learning and data assimilation for dynamical systems meshfree methods in computational sciences multiscale modelling and simulation quantum computing workshop part vii simulations of flow and transport modeling algorithms and computation smart systems bringing together computer vision sensor networks and machine learning software engineering for computational science solving problems with uncertainties teaching computational science uncertainty quantification for computational models the conference was canceled due to the covid 19 pandemic

Computational statistical physics *2007-12-10*

the only book to provide a unified view of the interplay between computational number theory and cryptography computational number theory and modern cryptography are two of the most important and fundamental research fields in information security in this book song y yang combines knowledge of these two critical fields providing a unified view of the relationships between computational number theory and cryptography the author takes an innovative approach presenting mathematical ideas first thereupon treating cryptography as an immediate application of the mathematical concepts the book also presents topics from number theory which are relevant for applications in public key cryptography as well as modern topics such as coding and lattice based cryptography for post quantum cryptography the author further covers the current research and applications for common cryptographic algorithms describing the mathematical problems behind these applications in a manner accessible to computer scientists and engineers makes mathematical problems accessible to computer scientists and engineers by showing their immediate application presents topics from number theory relevant for public key cryptography applications covers modern topics such as coding and lattice based cryptography for post quantum cryptography starts with the basics then goes into applications and areas of active research geared at a global audience classroom tested in north america europe and asia includes exercises in every chapter instructor resources available on the book s companion website computational number theory and modern cryptography is ideal for graduate and advanced undergraduate students in computer science communications engineering cryptography and mathematics computer scientists practicing cryptographers and other professionals involved in various security schemes will also find this book to be a helpful reference

Computational Many-Particle Physics 2021-08-10

this book constitutes the refereed proceedings of the 15th international conference on advances in computational collective intelligence iccci 2023 held in budapest hungary during september 27 29 2023 the 59 full papers included in this book were carefully reviewed and selected from 218 submissions they were organized in topical sections as follows collective intelligence and collective decision making deep learning techniques natural language processing data mining and machine learning social networks and speak communication cybersecurity and internet of things cooperative strategies for decision making and optimization digital content understanding and application for industry 4 0 and computational intelligence in medical applications

Computational Analysis and Deep Learning for Medical Care 2018

the five volume set Incs 3980 3984 constitutes the refereed proceedings of the international conference on computational science and its applications iccsa 2006 the volumes present a total of 664 papers organized according to the five major conference themes computational methods algorithms and applications high performance technical computing and networks advanced and emerging applications geometric modelling graphics and visualization information systems and information technologies this is part iv

Energy of the Future 2020-06-18

the 2004 international symposium on computational and information sciences cis 2004 aimed at bringing researchers in the area of computational and formation sciences together to exchange new ideas and to explore new ground the goal of the conference was to push the application of modern computing technologies to science engineering and information technologies to a new level of sophistication and understanding

the initial idea to organize such a conference with a focus on computation and applications was originated by dr junzhang during his visit to china in august 2003 in consultation with a few friends including dr jing liu at the chinese academy of sciences dr jun hai yong at tsinghua university dr geng yang at nanjing university of posts and communications and a few others after several discussions with dr ji huanhe it was decided that donghua university would host cis 2004 cis 2004 attempted to distinguish itself from other conferences in its phasis on participation rather than publication a submitted paper was only reviewed with the explicit understanding that if accepted at least one of the authors would attend and present the paper at the conference it is our lief that attending conferences is an important part of one s academic career through which academic networks can be built that may bene t one s academic life in the long run we also made every e ort to support graduate students in attending cis 2004 in addition to set reduced registration fees for full time graduate students we awarded up to three prizes for to the best student papers at cis 2004 students whose papers were selected for awards were given cash prizes plus a waiver of registration fees

Computational Science – ICCS 2020 2012-11-28

this book a mosaic of computational topics from classical to novel is a collection of papers published to honor professor jetty kleijn on the occasion of her 65th birthday the scope and reach of her research is truly broad she has made significant and lasting contributions in several research areas both through the solving of challenging problems and in her pioneering of new research directions she has published influential papers contributing to the foundations of computer science in particular in the area of formal languages and automata theory to concurrency theory in particular petri nets and to natural computing in particular bio inspired computing and the computational modeling of

bio processes a significant part of professor kleijn s research portfolio is interdisciplinary including her work on the petri net modeling of biological processes and the development of novel models of information processing in bio systems such as reaction systems she is also passionately engaged in promoting the involvement of women in computer science jetty and her work are well recognized by the scientific community a fact demonstrated by the enthusiastic response to the invitation to contribute to this book and the 14 carefully refereed papers collected together here explore a number of research topics that are either directly or indirectly related to research directions pursued by jetty kleijn in the course of her career

Computational Number Theory and Modern Cryptography 2023-09-21

this book vol ii presents select proceedings of the first online international conference on recent advances in computational and experimental mechanics icracem 2020 and focuses on theoretical computational and experimental aspects of solid and fluid mechanics various topics covered are computational modelling of extreme events mechanical modelling of robots mechanics and design of cellular materials mechanics of soft materials mechanics of thin film and multi layer structures meshfree and particle based formulations in continuum mechanics multi scale computations in solid mechanics and materials multiscale mechanics of brittle and ductile materials topology and shape optimization techniques acoustics including aero acoustics and wave propagation aerodynamics dynamics and control in micro nano engineering dynamic instability and buckling flow induced noise and vibration inverse problems in mechanics and system identification measurement and analysis techniques in nonlinear dynamic systems multibody dynamical systems and applications nonlinear dynamics and control stochastic mechanics structural dynamics and earthquake engineering structural health monitoring and damage assessment turbomachinery noise vibrations of continuous systems characterization of advanced materials damage identification and non destructive evaluation experimental fire mechanics and damage experimental fluid mechanics experimental solid mechanics measurement in extreme environments modal testing and dynamics experimental hydraulics mechanism of scour under steady and unsteady flows vibration measurement and control bio inspired materials constitutive modelling of materials fracture mechanics mechanics of adhesion tribology and wear mechanics of composite materials mechanics of multifunctional materials multiscale modelling of materials phase transformations in materials plasticity and creep in materials fluid mechanics computational fluid dynamics fluid structure interaction free surface moving boundary and pipe flow hydrodynamics multiphase flows propulsion internal flow physics turbulence modelling wave mechanics flow through porous media shock boundary layer interactions sediment transport wave structure interaction reduced order models turbo machinery experimental hydraulics mechanism of scour under steady and unsteady flows applications of machine learning and artificial intelligence in mechanics transport phenomena and soft computing tools in fluid mechanics the contents of these two volumes volumes i and ii discusses various attributes of modern age mechanics in various disciplines such as aerospace civil mechanical ocean engineering and naval architecture the book will be a valuable reference for beginners researchers and professionals interested in solid and fluid mechanics and allied fields

Advances in Computational Collective Intelligence 2006-05-11

this proceedings book presents state of the art research innovations in computational vision and bio inspired techniques due to the rapid advances in the emerging information communication and computing technologies the internet of things cloud and edge computing and artificial intelligence play a significant role in the computational vision context in recent years computational vision has contributed to enhancing the methods of controlling the

operations in biological systems like ant colony optimization neural networks and immune systems moreover the ability of computational vision to process a large number of data streams by implementing new computing paradigms has been demonstrated in numerous studies incorporating computational techniques in the emerging bio inspired models the book reveals the theoretical and practical aspects of bio inspired computing techniques like machine learning sensor based models evolutionary optimization and big data modeling and management that make use of effectual computing processes in the bio inspired systems as such it contributes to the novel research that focuses on developing bio inspired computing solutions for various domains such as human computer interaction image processing sensor based single processing recommender systems and facial recognition which play an indispensable part in smart agriculture smart city biomedical and business intelligence applications

Computational Science and Its Applications – ICCSA 2006 2005-01-18

in attempts to reduce greenhouse gas emissions many alternatives to manufacturing have been recommended from a number of international organizations although challenges will arise remanufacturing has the ability to transform ecological and business value computational intelligence in remanufacturing introduces various computational intelligence techniques that are applied to remanufacturing related issues results and lessons from specific applications while highlighting future development and research this book is an essential reference for students researchers and practitioners in mechanical industrial and electrical engineering

Computational and Information Science 2020-11-20

this two volume set consisting of Incs 7181 and Incs 7182 constitutes the thoroughly refereed proceedings of the 13th international conference on computer linguistics and intelligent processing held in new delhi india in march 2012 the total of 92 full papers were carefully reviewed and selected for inclusion in the proceedings the contents have been ordered according to the following topical sections nlp system architecture lexical resources morphology and syntax word sense disambiguation and named entity recognition semantics and discourse sentiment analysis opinion mining and emotions natural language generation machine translation and multilingualism text categorization and clustering information extraction and text mining information retrieval and question answering document summarization and applications

A Mosaic of Computational Topics: from Classical to Novel 2022-02-26

annotation the four volume set Incs 4487 4490 constitutes the refereed proceedings of the 7th international conference on computational science iccs 2007 held in beijing china in may 2007 more than 2400 submissions were made to the main conference and its 35 topical workshops the 80 revised full papers and 11 revised short papers of the main track were carefully reviewed and selected from 360 submissions and are presented together with 624 accepted workshop papers in four volumes according to the iccs 2007 theme advancing science and society through computation the papers cover a large volume of topics in computational science and related areas from multiscale physics to wireless networks and from graph theory to tools for program development the papers are arranged in topical sections on efficient data management parallel monte carlo algorithms simulation of multiphysics multiscale systems dynamic data driven application systems computer graphics and geometric modeling computer algebra systems computational chemistry computational approaches and techniques in bioinformatics computational finance and business intelligence geocomputation high level parallel programming networks theory and applications collective intelligence for semantic and knowledge grid collaborative and cooperative environments tools for program

development and analysis in cs intelligent agents in computing systems cs in software engineering computational linguistics in hci internet computing in science and engineering workflow systems in e science graph theoretic algorithms and applications in cs teaching cs high performance data mining mining text semi structured or multimedia data computational methods in energy economics risk analysis advances in computational geomechanics and geophysics meta synthesis and complex systems scientific computing in electronics engineering wireless and mobile systems high performance networked media and services evolution toward next generation internet real time systems and adaptive applications evolutionary algorithms and evolvable systems

Recent Advances in Computational and Experimental Mechanics, Vol II

2020-01-06

computational intelligence ci and bioprocess are well established research areas which have much to offer each other under the perspective of the ci area biop cess can be considered a vast application area with a growing number of complex and challenging tasks to be dealt with whose solutions can contribute to boosting the development of new intelligent techniques as well as to help the refinement and s cialization of many of the already existing techniques under the perspective of the bioprocess area ci can be considered a useful repertoire of theories methods and techniques that can contribute and offer interesting alternative approaches for solving many of its problems particularly those hard to solve using conventional techniques although throughout the past years ci and bioprocess areas have accumulated substantial specific knowledge and progress has been quick and with a high degree of success we believe there is still a long way to go in order to use the potentialities of the available ci techniques and knowledge at their full extent as tools for supporting problem solving in bioprocesses one of the reasons is the fact that both areas have progressed steadily and have been continuously accumulating and refining specific knowledge another reason is the high level of technical expertise demanded by each of them the acquisition of technical skills experience and good insights in either of the two areas is very demanding and a hard task to be accomplished by any professional

Computational Vision and Bio-Inspired Computing 2013-12-31

Computational Intelligence in Remanufacturing 2012-03-06

Computational Linguistics and Intelligent Text Processing 2007-05-18

Computational Science - ICCS 2007 2009-06-29

Computational Intelligence Techniques for Bioprocess Modelling, Supervision and Control

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