Free epub A hybrid geneticalgorithm and tabu search approach for Copy

this edited volume is targeted at presenting the latest state of the art methodologies in hybrid evolutionary algorithms the chapters deal with the theoretical and methodological aspects as well as various applications to many real world problems from science technology business or commerce overall the book has 14 chapters including an introductory chapter giving the fundamental definitions and some important research challenges the contributions were selected on the basis of fundamental ideas concepts rather than the thoroughness of techniques deployed this book brings together the latest findings on efficient solutions of multi many objective optimization problems from the leading researchers in the field the focus is on solving real world optimization problems using strategies ranging from evolutionary to hybrid frameworks and involving various computation platforms the topics covered include solution frameworks using evolutionary to hybrid models in application areas like analytics cancer research traffic management networks and communications e governance quantum technology image processing etc as such the book offers a valuable resource for all postgraduate students and researchers interested in exploring solution frameworks for multi many objective optimization problems intelligent hybrid systems fuzzy logic neural networks and genetic algorithms is an organized edited collection of contributed chapters covering basic principles methodologies and applications of fuzzy systems neural networks and genetic algorithms all chapters are original contributions by leading researchers written exclusively for this volume this book reviews important concepts and models and focuses on specific methodologies common to fuzzy systems neural networks and evolutionary computation the emphasis is on development of cooperative models of hybrid systems included are applications related to intelligent data analysis process analysis intelligent adaptive information systems systems identification nonlinear systems power and water system design and many others intelligent hybrid systems fuzzy logic neural networks and genetic algorithms provides researchers and engineers with up to date coverage of new results methodologies and applications for building intelligent systems capable of solving large scale problems this book deals with the fundamentals of genetic algorithms and their applications in a variety of different areas of engineering and science most significant update to the second edition is the matlab codes that accompany the text provides a thorough discussion of hybrid genetic algorithms features more examples than first edition in this paper we present a hybrid intelligent system based on neutrosophic logic nl in conjunction with genetic algorithm ga for classification the neutrosophic logic is adapted for representing different forms of knowledge ga is used to refine the generated neutrosophic rules the performance of the proposed system is tested on three real world databases iris wine and wisconsin diagnostic breast cancer wdbc in a series of experiments we compare the performance of the proposed genetic neutrosophic rule based classification system with that of the neutrosophic rule based classification system the performance of both classifiers is measured for the three real world data sets we have reached an average accuracy 98 39 in genetic neutrosophic against 94 78 for the corresponding neutrosophic this book offers a basic introduction to genetic algorithms it provides a detailed explanation of genetic algorithm concepts and examines numerous genetic algorithm optimization problems in addition the book presents implementation of optimization problems using c and c as well as simulated solutions for genetic algorithm problems using matlab 7 0 it also includes application case studies on genetic algorithms in emerging fields multiobjective resource management problems m rmp involves deciding how to divide a resource of limited availability among multiple demands in a way that optimizes current objectives rmp is widely used to plan the optimal allocating or management resources process among various projects or business units for the maximum product and the minimum cost resources might be manpower assets raw materials capital or anything else in limited supply the solution method of rmp however has its own problems this book identifies four of them along with the proposed methods to solve them mathematical models combined with effective multistage genetic algorithm ga approach help to develop a method for handling the m rmp the proposed approach not only can solve relatively large size problems but also has better performance than the conventional ga and the proposed method provides more flexibility to m rmp model which is the key to survive under severely competitive environment

WE ALSO BELIEVE THAT THE PROPOSED METHOD CAN BE ADAPTED TO OTHER PRODUCTION DISTRIBUTION PLANNING AND ALL M RAP MODELS IN THIS BOOK FOUR PROBLEMS WITH M RMP MODELS WILL BE CLEARLY OUTLINED AND A MULTISTAGE HYBRIDIZED GA METHOD FOR FINDING THE BEST SOLUTION IS THEN IMPLEMENTED COMPARISON RESULTS WITH THE CONVENTIONAL GA METHODS ARE ALSO PRESENTED THIS BOOK ALSO MENTIONS SEVERAL USEFUL COMBINATORIAL OPTIMIZATION MODELS IN PROCESS SYSTEM AND PROPOSED EFFECTIVE SOLUTION METHODS BY USING MULTISTAGE GA NOTE PART OF THIS BOOK ONCE PUBLISHED IN INTERNATIONAL JOURNALS SCI SCIENCE DIRECT INSIDE BE ACCEPTED HAVE FIVE ARTICLES IN THIS PAPER A MODEL BASED DIAGNOSTIC METHOD WHICH UTILIZES NEURAL NETWORKS AND GENETIC ALGORITHMS IS INVESTIGATED NEURAL NETWORKS ARE APPLIED TO ESTIMATE THE ENGINE INTERNAL HEALTH AND GENETIC ALGORITHMS ARE APPLIED FOR SENSOR BIAS DETECTION AND ESTIMATION THIS HYBRID APPROACH TAKES ADVANTAGE OF THE NONLINEAR ESTIMATION CAPABILITY PROVIDED BY NEURAL NETWORKS WHILE IMPROVING THE ROBUSTNESS TO MEASUREMENT UNCERTAINTY THROUGH THE APPLICATION OF GENETIC ALGORITHMS THE HYBRID DIAGNOSTIC TECHNIQUE ALSO HAS THE ABILITY TO RANK MULTIPLE POTENTIAL SOLUTIONS FOR A GIVEN SET OF ANOMALOUS SENSOR MEASUREMENTS IN ORDER TO REDUCE FALSE ALARMS AND MISSED DETECTIONS THE PERFORMANCE OF THE HYBRID DIAGNOSTIC TECHNIQUE IS EVALUATED THROUGH SOME CASE STUDIES DERIVED FROM A TURBOFAN ENGINE SIMULATION THE RESULTS SHOW THIS APPROACH IS PROMISING FOR RELIABLE DIAGNOSTICS OF AIRCRAFT ENGINES THIS BOOK PROVIDES A DEFINITION OF HYBRID SYSTEMS SUMMARIZES THE CURRENT STATE OF THE ART AND PRESENTS CONTRIBUTIONS THAT DETAIL INNOVATIVE METHODS FOR INTEGRATING DIFFERENT INTELLIGENT TECHNIQUES THE BOOK IS INTENDED TO EQUIP RESEARCHERS APPLICATIONS DEVELOPERS AND MANAGERS WITH KEY REFERENCE AND RESOURCE MATERIAL FOR THE SUCCESSFUL DEVELOPMENT OF HYBRID SYSTEMS GENETIC ALGORITHMS GA HAVE BECOME POPULAR TOOLS FOR SEARCH OPTIMIZATION MACHINE LEARNING AND SOLVING DESIGN PROBLEMS THESE ALGORITHMS USE SIMULATED EVOLUTION TO SEARCH FOR SOLUTIONS TO COMPLEX PROBLEMS A GA IS A POPULATION BASED COMPUTATIONAL METHOD IN WHICH THE POPULATION USING RANDOMIZED PROCESSES OF SELECTION CROSSOVER AND MUTATION EVOLVES TOWARDS BETTER SOLUTIONS IN THIS BOOK THE AUTHORS PRESENT CURRENT RESEARCH INCLUDING THE APPLICATION OF GENETIC ALGORITHM OPTIMIZATION TECHNIQUES IN BEAM STEERING OF CIRCULAR ARRAY ANTENNA HYBRID GENETIC ALGORITHMS CHANGING RANGE GENETIC ALGORITHMS STUDY OF THE INFLUENCE OF FOREST CANOPIES ON THE ACCURACY OF GPS MEASUREMENTS USING GENETIC ALGORITHMS ROUNDNESS EVALUATION BY GENETIC ALGORITHM AND OPTIMAL SIZING OF ANALOGUE INTEGRATED CIRCUITS BY APPLYING GENETIC ALGORITHMS HYBRID INTELLIGENT SYSTEMS SUMMARIZES THE STRENGTHS AND WEAKNESSES OF FIVE INTELLIGENT TECHNOLOGIES FUZZY LOGIC GENETIC ALGORITHMS CASE BASED REASONING NEURAL NETWORKS AND EXPERT SYSTEMS REVIEWING THE STATUS AND SIGNIFICANCE OF RESEARCH INTO THEIR INTEGRATION ENGINEERING AND SCIENTIFIC EXAMPLES AND CASE STUDIES ARE USED TO ILLUSTRATE PRINCIPLES AND APPLICATION DEVELOPMENT TECHNIQUES THE READER WILL GAIN A CLEAR IDEA OF THE CURRENT STATUS OF HYBRID INTELLIGENT SYSTEMS AND DISCOVER HOW TO CHOOSE AND DEVELOP APPROPRIATE APPLICATIONS THE BOOK IS BASED ON A THOROUGH LITERATURE SEARCH OF RECENT PUBLICATIONS ON RESEARCH AND DEVELOPMENT IN HYBRID INTELLIGENT SYSTEMS THE RESULTING 50 PAGE REFERENCE SECTION OF THE BOOK IS INVALUABLE THE BOOK STARTS WITH A SUMMARY OF THE FIVE MAJOR INTELLIGENT TECHNOLOGIES AND OF THE ISSUES IN AND CURRENT STATUS OF RESEARCH INTO THEM EACH SUBSEQUENT CHAPTER PRESENTS A DETAILED DISCUSSION OF A DIFFERENT COMBINATION OF INTELLIGENT TECHNOLOGIES ALONG WITH EXAMPLES AND CASE STUDIES FOUR CHAPTERS CONTAIN DETAILED CASE STUDIES OF WORKING HYBRID SYSTEMS THE BOOK ENABLES THE READER TO DESCRIBE THE IMPORTANT CONCEPTS STRENGTHS AND LIMITATIONS OF EACH TECHNOLOGY RECOGNIZE AND ANALYZE POTENTIAL PROBLEMS WITH THE APPLICATION OF HYBRID SYSTEMS CHOOSE APPROPRIATE HYBRID INTELLIGENT SOLUTIONS UNDERSTAND HOW APPLICATIONS ARE DESIGNED WITH ANY OF THE APPROACHES COVERED CHOOSE APPROPRIATE COMMERCIAL DEVELOPMENT SHELLS OR TOOLS AN INVALUABLE REFERENCE SOURCE FOR THOSE WHO WISH TO APPLY INTELLIGENT SYSTEMS TECHNIQUES TO THEIR OWN PROBLEMS WE ARE PLEASED TO WELCOME READERS TO THIS ISSUE OF THE JOURNAL OF APPLIED OPERATIONAL RESEARCH JAOR VOLUME 3 NUMBER 2 THE JOURNAL REPORTS ON DEVELOPMENTS IN ALL ASPECTS OF OPERATIONAL RESEARCH INCLUDING THE LATEST ADVANCES AND APPLICATIONS IT IS A PRIMARILY GOAL OF THE JOURNAL TO FOCUS ON AND PUBLISH PRACTICAL CASE STUDIES WHICH ILLUSTRATE REAL LIFE APPLICATIONS FAST ADVANCES IN INFORMATION TECHNOLOGY HAVE LED TO A SMARTER WORLD VISION WITH UBIQUITOUS INTERCONNECTION AND INTELLIGENCE SMART MANUFACTURING INNOVATION AND TRANSFORMATION INTERCONNECTION AND INTELLIGENCE COVERS BOTH THEORETICAL PERSPECTIVES AND PRACTICAL APPROACHES TO SMART MANUFACTURING RESEARCH AND DEVELOPMENT TRIGGERED BY UBIQUITOUS INTERCONNECTION AND INTELLIGENCE THIS REFERENCE WORK DISCUSSES THE TRANSFORMATION OF MANUFACTURING THE LATEST DEVELOPMENTS IN SMART MANUFACTURING INNOVATION CURRENT AND EMERGING TECHNOLOGY OPPORTUNITIES AND MARKET IMPERATIVES THAT ENABLE MANUFACTURING INNOVATION AND TRANSFORMATION USEFUL TOOLS FOR READERS IN INDUSTRY ACADEMIA AND GOVERNMENT THIS BOOK INCLUDES

HIGH QUALITY RESEARCH PAPERS PRESENTED AT THE SIXTH INTERNATIONAL CONFERENCE ON INNOVATIVE COMPUTING AND COMMUNICATION ICICC 2023 WHICH IS HELD AT THE SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES UNIVERSITY OF DELHI DELHI INDIA ON FEBRUARY 17 18 2023 INTRODUCING THE INNOVATIVE WORKS OF SCIENTISTS PROFESSORS RESEARCH SCHOLARS STUDENTS AND INDUSTRIAL EXPERTS IN THE FIELD OF COMPUTING AND COMMUNICATION THE BOOK PROMOTES THE TRANSFORMATION OF FUNDAMENTAL RESEARCH INTO INSTITUTIONAL AND INDUSTRIALIZED RESEARCH AND THE CONVERSION OF APPLIED EXPLORATION INTO REAL TIME APPLICATIONS COMBINATORIAL OPTIMIZATION IS THE PROCESS OF FINDING THE BEST OR OPTIMAL SO LUTION FOR PROBLEMS WITH A DISCRETE SET OF FEASIBLE SOLUTIONS APPLICATIONS ARISE IN NUMEROUS SETTINGS INVOLVING OPERATIONS MANAGEMENT AND LOGISTICS SUCH AS ROUTING SCHEDULING PACKING INVENTORY AND PRODUCTION MANAGEMENT LO CATION LOGIC AND ASSIGNMENT OF RESOURCES THE ECONOMIC IMPACT OF COMBI NATORIAL OPTIMIZATION IS PROFOUND AFFECTING SECTORS AS DIVERSE AS TRANSPORTA TION AIRLINES TRUCKING RAIL AND SHIPPING FORESTRY MANUFACTURING LOGISTICS AEROSPACE ENERGY ELECTRICAL POWER PETROLEUM AND NATURAL GAS TELECOMMU NICATIONS BIOTECHNOLOGY FINANCIAL SERVICES AND AGRICULTURE WHILE MUCH PROGRESS HAS BEEN MADE IN FINDING EXACT PROVABLY OPTIMAL SO LUTIONS TO SOME COMBINATORIAL OPTIMIZATION PROBLEMS USING TECHNIQUES SUCH AS DYNAMIC PROGRAMMING CUTTING PLANES AND BRANCH AND CUT METHODS MANY HARD COMBINATORIAL PROBLEMS ARE STILL NOT SOLVED EXACTLY AND REQUIRE GOOD HEURISTIC METHODS MOREOVER REACHING OPTIMAL SOLUTIONS IS IN MANY CASES MEANINGLESS AS IN PRACTICE WE ARE OFTEN DEALING WITH MODELS THAT ARE ROUGH SIMPLIFICATIONS OF REALITY THE AIM OF HEURISTIC METHODS FOR COMBINATORIAL OP TIMIZATION IS TO QUICKLY PRODUCE GOOD QUALITY SOLUTIONS WITHOUT NECESSARILY PROVIDING ANY GUARANTEE OF SOLUTION QUALITY METAHEURISTICS ARE HIGH LEVEL PROCEDURES THAT COORDINATE SIMPLE HEURISTICS SUCH AS LOCAL SEARCH TO FIND SOLU TIONS THAT ARE OF BETTER QUALITY THAN THOSE FOUND BY THE SIMPLE HEURISTICS ALONE MODEM METAHEURISTICS INCLUDE SIMULATED ANNEALING GENETIC ALGORITHMS TABU SEARCH GRASP SCATTER SEARCH ANT COLONY OPTIMIZATION VARIABLE NEIGHBORHOOD SEARCH AND THEIR HYBRIDS GENETIC PROGRAMMING IS A NEW AND EVOLUTIONARY METHOD THAT HAS BECOME A NOVEL AREA OF RESEARCH WITHIN ARTIFICIAL INTELLIGENCE KNOWN FOR AUTOMATICALLY GENERATING HIGH QUALITY SOLUTIONS TO OPTIMIZATION AND SEARCH PROBLEMS THIS AUTOMATIC ASPECT OF THE ALGORITHMS AND THE MIMICKING OF NATURAL SELECTION AND GENETICS MAKES GENETIC PROGRAMMING AN INTELLIGENT COMPONENT OF PROBLEM SOLVING THAT IS HIGHLY REGARDED FOR ITS EFFICIENCY AND VAST CAPABILITIES WITH THE ABILITY TO BE MODIFIED AND ADAPTED EASILY DISTRIBUTED AND EFFECTIVE IN LARGE SCALE WIDE VARIETY OF PROBLEMS GENETIC ALGORITHMS AND PROGRAMMING CAN BE UTILIZED IN MANY DIVERSE INDUSTRIES THIS MULTI INDUSTRY USES VARY FROM FINANCE AND ECONOMICS TO BUSINESS AND MANAGEMENT ALL THE WAY TO HEALTHCARE AND THE SCIENCES THE USE OF GENETIC PROGRAMMING AND ALGORITHMS GOES BEYOND HUMAN CAPABILITIES ENHANCING THE BUSINESS AND PROCESSES OF VARIOUS ESSENTIAL INDUSTRIES AND IMPROVING FUNCTIONALITY ALONG THE WAY THE RESEARCH ANTHOLOGY ON MULTI INDUSTRY USES OF GENETIC PROGRAMMING AND ALGORITHMS COVERS THE IMPLEMENTATION TOOLS AND TECHNOLOGIES AND IMPACT ON SOCIETY THAT GENETIC PROGRAMMING AND ALGORITHMS HAVE HAD THROUGHOUT MULTIPLE INDUSTRIES BY TAKING A MULTI INDUSTRY APPROACH THIS BOOK COVERS THE FUNDAMENTALS OF GENETIC PROGRAMMING THROUGH ITS TECHNOLOGICAL BENEFITS AND CHALLENGES ALONG WITH THE LATEST ADVANCEMENTS AND FUTURE OUTLOOKS FOR COMPUTER SCIENCE THIS BOOK IS IDEAL FOR ACADEMICIANS BIOLOGICAL ENGINEERS COMPUTER PROGRAMMERS SCIENTISTS RESEARCHERS AND UPPER LEVEL STUDENTS SEEKING THE LATEST RESEARCH ON GENETIC PROGRAMMING THIS BOOK PROVIDES A HIGHLY ACCESSIBLE INTRODUCTION TO EVOLUTIONARY COMPUTATION IT DETAILS BASIC CONCEPTS HIGHLIGHTS SEVERAL APPLICATIONS OF EVOLUTIONARY COMPUTATION AND INCLUDES SOLVED PROBLEMS USING MATLAB SOFTWARE AND C C THIS BOOK ALSO OUTLINES SOME IDEAS ON WHEN GENETIC ALGORITHMS AND GENETIC PROGRAMMING SHOULD BE USED THE MOST DIFFICULT PART OF USING A GENETIC ALGORITHM IS HOW TO ENCODE THE POPULATION AND THE AUTHOR DISCUSSES VARIOUS WAYS TO DO THIS OPTIMIZATION TECHNIQUES HAVE DEVELOPED INTO A MODERN DAY SOLUTION FOR REAL WORLD PROBLEMS IN VARIOUS INDUSTRIES AS A WAY TO IMPROVE PERFORMANCE AND HANDLE ISSUES OF UNCERTAINTY OPTIMIZATION RESEARCH BECOMES A TOPIC OF SPECIAL INTEREST ACROSS DISCIPLINES PROBLEM SOLVING AND UNCERTAINTY MODELING THROUGH OPTIMIZATION AND SOFT COMPUTING APPLICATIONS PRESENTS THE LATEST RESEARCH TRENDS AND DEVELOPMENTS IN THE AREA OF APPLIED OPTIMIZATION METHODOLOGIES AND SOFT COMPUTING TECHNIQUES FOR SOLVING COMPLEX PROBLEMS TAKING A MULTI DISCIPLINARY APPROACH THIS CRITICAL PUBLICATION IS AN ESSENTIAL REFERENCE SOURCE FOR ENGINEERS MANAGERS RESEARCHERS AND POST GRADUATE STUDENTS ANNOTATION PROCEEDINGS FROM THE FIRST INTERNATIONAL CONFERENCE ON INVERSE PROBLEMS RECENT THEORETICAL DEVELOPMENT AND NUMERICAL APPROACHES HELD AT THE CITY UNIVERSITY OF HONG KONG FROM JANUARY 9 12 2002 IN RECENT YEARS GENETIC ALGORITHMS GA AND ARTIFICIAL NEURAL NETWORKS ANN HAVE PROGRESSIVELY INCREASED IN IMPORTANCE AMONGST THE TECHNIQUES ROUTINELY USED IN

CHEMOMETRICS THIS BOOK CONTAINS CONTRIBUTIONS FROM EXPERTS IN THE FIELD IS DIVIDED IN TWO SECTIONS GA AND ANN IN EACH PART TUTORIAL CHAPTERS ARE INCLUDED IN WHICH THE THEORETICAL BASES OF EACH TECHNIQUE ARE EXPERTLY BUT SIMPLY DESCRIBED THESE ARE FOLLOWED BY APPLICATION CHAPTERS IN WHICH SPECIAL EMPHASIS WILL BE GIVEN TO THE ADVANTAGES OF THE APPLICATION OF GA OR ANN TO THAT SPECIFIC PROBLEM COMPARED TO CLASSICAL TECHNIQUES AND TO THE RISKS CONNECTED WITH ITS MISUSE THIS BOOK IS OF USE TO ALL THOSE WHO ARE USING OR ARE INTERESTED IN GA AND ANN BEGINNERS CAN FOCUS THEIR ATTENTIONS ON THE TUTORIALS WHILST THE MOST ADVANCED READERS WILL BE MORE INTERESTED IN LOOKING AT THE APPLICATIONS OF THE TECHNIQUES IT IS ALSO SUITABLE AS A REFERENCE BOOK FOR STUDENTS SUBJECT MATTER IS STEADILY INCREASING IN IMPORTANCE COMPARISON OF GENETIC ALGORITHMS GA AND ARTIFICIAL NEURAL NETWORKS ANN WITH THE CLASSICAL TECHNIQUES SUITABLE FOR BOTH BEGINNERS AND ADVANCED RESEARCHERS THIS BOOK PROVIDES COMPREHENSIVE INTRODUCTION TO A CONSORTIUM OF TECHNOLOGIES UNDERLYING SOFT COMPUTING AN EVOLVING BRANCH OF COMPUTATIONAL INTELLIGENCE THE CONSTITUENT TECHNOLOGIES DISCUSSED COMPRISE NEURAL NETWORKS FUZZY LOGIC GENETIC ALGORITHMS AND A NUMBER OF HYBRID SYSTEMS WHICH INCLUDE CLASSES SUCH AS NEURO FUZZY FUZZY GENETIC AND NEURO GENETIC SYSTEMS THE HYBRIDIZATION OF THE TECHNOLOGIES IS DEMONSTRATED ON ARCHITECTURES SUCH AS FUZZY BACK PROPAGATION NETWORKS NN FL SIMPLIFIED FUZZY ARTMAP NN FL AND FUZZY ASSOCIATIVE MEMORIES THE BOOK ALSO GIVES AN EXHAUSTIVE DISCUSSION OF FL GA HYBRIDIZATION EVERY ARCHITECTURE HAS BEEN DISCUSSED IN DETAIL THROUGH ILLUSTRATIVE EXAMPLES AND APPLICATIONS THE ALGORITHMS HAVE BEEN PRESENTED IN PSEUDO CODE WITH A STEP BY STEP ILLUSTRATION OF THE SAME IN PROBLEMS THE APPLICATIONS DEMONSTRATIVE OF THE POTENTIAL OF THE ARCHITECTURES HAVE BEEN CHOSEN FROM DIVERSE DISCIPLINES OF SCIENCE AND ENGINEERING THIS BOOK WITH A WEALTH OF INFORMATION THAT IS CLEARLY PRESENTED AND ILLUSTRATED BY MANY EXAMPLES AND APPLICATIONS IS DESIGNED FOR USE AS A TEXT FOR COURSES IN SOFT COMPUTING AT BOTH THE SENIOR UNDERGRADUATE AND FIRST YEAR POST GRADUATE ENGINEERING LEVELS IT SHOULD ALSO BE OF INTEREST TO RESEARCHERS AND TECHNOLOGISTS DESIROUS OF APPLYING SOFT COMPUTING TECHNOLOGIES TO THEIR RESPECTIVE FIELDS OF WORK IN RECENT YEARS OUR WORLD HAS EXPERIENCED A PROFOUND SHIFT AND PROGRESSION IN AVAILABLE COMPUTING AND KNOWLEDGE SHARING INNOVATIONS THESE EMERGING ADVANCEMENTS HAVE DEVELOPED AT A RAPID PACE DISSEMINATING INTO AND AFFECTING NUMEROUS ASPECTS OF CONTEMPORARY SOCIETY THIS HAS CREATED A PIVOTAL NEED FOR AN INNOVATIVE COMPENDIUM ENCOMPASSING THE LATEST TRENDS CONCEPTS AND ISSUES SURROUNDING THIS RELEVANT DISCIPLINE AREA DURING THE PAST 15 YEARS THE ENCYCLOPEDIA OF INFORMATION SCIENCE AND TECHNOLOGY HAS BECOME RECOGNIZED AS ONE OF THE LANDMARK SOURCES OF THE LATEST KNOWLEDGE AND DISCOVERIES IN THIS DISCIPLINE THE ENCYCLOPEDIA OF INFORMATION SCIENCE AND TECHNOLOGY FOURTH EDITION IS A 10 VOLUME SET WHICH INCLUDES 705 ORIGINAL AND PREVIOUSLY UNPUBLISHED RESEARCH ARTICLES COVERING A FULL RANGE OF PERSPECTIVES APPLICATIONS AND TECHNIQUES CONTRIBUTED BY THOUSANDS OF EXPERTS AND RESEARCHERS FROM AROUND THE GLOBE THIS AUTHORITATIVE ENCYCLOPEDIA IS AN ALL ENCOMPASSING WELL ESTABLISHED REFERENCE SOURCE THAT IS IDEALLY DESIGNED TO DISSEMINATE THE MOST FORWARD THINKING AND DIVERSE RESEARCH FINDINGS WITH CRITICAL PERSPECTIVES ON THE IMPACT OF INFORMATION SCIENCE MANAGEMENT AND NEW TECHNOLOGIES IN MODERN SETTINGS INCLUDING BUT NOT LIMITED TO COMPUTER SCIENCE EDUCATION HEALTHCARE GOVERNMENT ENGINEERING BUSINESS AND NATURAL AND PHYSICAL SCIENCES IT IS A PIVOTAL AND RELEVANT SOURCE OF KNOWLEDGE THAT WILL BENEFIT EVERY PROFESSIONAL WITHIN THE FIELD OF INFORMATION SCIENCE AND TECHNOLOGY AND IS AN INVALUABLE ADDITION TO EVERY ACADEMIC AND CORPORATE LIBRARY THIRD INTERNATIONAL CONFERENCE ON NUMBER THEORY AND SMARANDACHE PROBLEMS 23 25 MARCH 2007 WEINAN TEACHER S UNIVERSITY CHINA PAPERS ON SMARANDACHE MULTI SPACES AND MATHEMATICAL COMBINATORICS SMARANDACHE STEPPED FUNCTIONS CUBE FREE INTEGERS AS SUMS OF TWO SQUARES RECURRENCES FOR GENERALIZED EULER NUMBERS THE GENERALIZATION OF THE PRIMITIVE NUMBER FUNCTION THE SMARANDACHE LCM FUNCTION AND ITS MEAN VALUE A CONJECTURE INVOLVING THE F SMARANDACHE LCM FUNCTION A NEW ARITHMETICAL FUNCTION AND ITS ASYMPTOTIC FORMULA AND OTHER SIMILAR TOPICS CONTRIBUTORS J WANG A MUKTIBODH M SELARIU X ZHANG Y ZHANG M LIU R ZHANG S MA L MAO AND MANY OTHERS THIS BOOK IS PART OF A THREE VOLUME SET THAT CONSTITUTES THE REFEREED PROCEEDINGS OF THE 11TH INTERNATIONAL CONFERENCE ON KNOWLEDGE BASED INTELLIGENT INFORMATION AND ENGINEERING SYSTEMS KES 2007 COVERAGE IN THIS FIRST VOLUME INCLUDES ARTIFICIAL NEURAL NETWORKS AND CONNECTIONISTS SYSTEMS FUZZY AND NEURO FUZZY SYSTEMS EVOLUTIONARY COMPUTATION MACHINE LEARNING AND CLASSICAL AI AGENT SYSTEMS AND INFORMATION ENGINEERING AND APPLICATIONS IN UBIQUITOUS COMPUTING ENVIRONMENTS AMID THE DYNAMIC GROWTH OF ARTIFICIAL INTELLIGENCE THIS BOOK PRESENTS A COLLECTION OF FINDINGS AND ADVANCEMENTS FROM THE SECOND EDITION OF THE A2IA ARTIFICIAL INTELLIGENCE AND INDUSTRIAL APPLICATIONS CONFERENCE THE CONFERENCE HOSTED BY ENSAM MEKN? S AT MOULAY ISMAIL UNIVERSITY MOROCCO FOSTERS KNOWLEDGE EXCHANGE IN AI FOCUSING PRIMARILY ON ITS INDUSTRIAL APPLICATIONS COVERING

A WIDE RANGE OF TOPICS THE BOOK HIGHLIGHTS THE ADAPTABLE NATURE OF AI AND ITS INCREASING IMPACT ON INDUSTRIAL SECTORS IT BRINGS TOGETHER CONTRIBUTIONS FROM AN INTERNATIONAL COHORT OF RESEARCHERS DISCUSSING THEMES SUCH AS INTELLIGENT MANUFACTURING AND MAINTENANCE INTELLIGENT SUPPLY CHAIN MANAGEMENT VARIOUS MODES OF LEARNING INCLUDING SUPERVISED UNSUPERVISED REINFORCEMENT SEMI SUPERVISED AND GRAPH BASED AS WELL AS NEURAL NETWORKS DEEP LEARNING PLANNING AND OPTIMIZATION A DEFINING FEATURE OF THIS EDITION IS ITS EXTENSIVE SCOPE AND EMPHASIS ON THE PRACTICAL APPLICATIONS OF AI ALONG WITH ITS FOUNDATIONAL ELEMENTS IT FACILITATES AN UNDERSTANDING OF AI S CURRENT STATE AND POTENTIAL FUTURE DIRECTION SHOWCASING RECENT DEVELOPMENTS THAT BRIDGE THE GAP BETWEEN THEORY AND PRACTICE DESIGNED FOR A DIVERSE READERSHIP THIS BOOK IS OF INTEREST TO AI PRACTITIONERS ACADEMICS AND ENTHUSIASTS AS WELL AS TO THOSE NEW TO THE FIELD IT PROVIDES AN OPPORTUNITY TO EXPLORE AI S CRITICAL ROLE IN INDUSTRIAL APPLICATIONS AND THE PRACTICAL INSIGHTS IT OFFERS ARE LIKELY TO BE BENEFICIAL FOR DECISION MAKING WITHIN INDUSTRIAL SETTINGS RESEARCHERS AND PRACTITIONERS ALIKE ARE INCREASINGLY TURNING TO SEARCH OP TIMIZATION AND MACHINE LEARNING PROCEDURES BASED ON NATURAL SELECTION AND NATURAL GENETICS TO SOLVE PROBLEMS ACROSS THE SPECTRUM OF HUMAN ENDEAVOR THESE GENETIC ALGORITHMS AND TECHNIQUES OF EVOLUTIONARY COMPUTATION ARE SOLV ING PROBLEMS AND INVENTING NEW HARDWARE AND SOFTWARE THAT RIVAL HUMAN DESIGNS THE KLUWER SERIES ON GENETIC ALGORITHMS AND EVOLUTIONARY COMPUTATION PUB LISHES RESEARCH MONOGRAPHS EDITED COLLECTIONS AND GRADUATE LEVEL TEXTS IN THIS RAPIDLY GROWING FIELD PRIMARY AREAS OF COVERAGE INCLUDE THE THEORY IMPLEMEN TATION AND APPLICATION OF GENETIC ALGORITHMS GAS EVOLUTION STRATEGIES ESS EVOLUTIONARY PROGRAMMING EP LEARNING CLASSIFIER SYSTEMS LCSS AND OTHER VARIANTS OF GENETIC AND EVOLUTIONARY COMPUTATION GEC THE SERIES ALSO PUB LISHES TEXTS IN RELATED FIELDS SUCH AS ARTIFICIAL LIFE ADAPTIVE BEHAVIOR ARTIFICIAL IMMUNE SYSTEMS AGENT BASED SYSTEMS NEURAL COMPUTING FUZZY SYSTEMS AND QUANTUM COMPUTING AS LONG AS GEC TECHNIQUES ARE PART OF OR INSPIRATION FOR THE SYSTEM BEING DESCRIBED THIS ENCYCLOPEDIC VOLUME ON THE USE OF THE ALGORITHMS OF GENETIC AND EVOLU TIONARY COMPUTATION FOR THE SOLUTION OF MULTI OBJECTIVE PROBLEMS IS A LANDMARK ADDITION TO THE LITERATURE THAT COMES JUST IN THE NICK OF TIME MULTI OBJECTIVE EVOLUTIONARY ALGORITHMS MOEAS ARE RECEIVING INCREASING AND UNPRECEDENTED ATTENTION RESEARCHERS AND PRACTITIONERS ARE FINDING AN IRRESISTIBLE MATCH BE TWEEN THE POPULATION AVAILABLE IN MOST GENETIC AND EVOLUTIONARY ALGORITHMS AND THE NEED IN MULTI OBJECTIVE PROBLEMS TO APPROXIMATE THE PARETO TRADE OFF CURVE OR SURFACE THIS BOOK CONSTITUTES THE PROCEEDINGS OF THE 9TH INTERNATIONAL CONFERENCE ON BIG DATA BIGDATA 2020 HELD AS PART OF SCF 2020 DURING SEPTEMBER 18 20 2020 THE CONFERENCE WAS PLANNED TO TAKE PLACE IN HONOLULU HI USA AND WAS CHANGED TO A VIRTUAL FORMAT DUE TO THE COVID 19 PANDEMIC THE 16 FULL AND 3 SHORT PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 52 SUBMISSIONS THE TOPICS COVERED ARE BIG DATA ARCHITECTURE BIG DATA MODELING BIG DATA AS A SERVICE BIG DATA FOR VERTICAL INDUSTRIES GOVERNMENT HEALTHCARE ETC BIG DATA ANALYTICS BIG DATA TOOLKITS BIG DATA OPEN PLATFORMS ECONOMIC ANALYSIS BIG DATA FOR ENTERPRISE TRANSFORMATION BIG DATA IN BUSINESS PERFORMANCE MANAGEMENT BIG DATA FOR BUSINESS MODEL INNOVATIONS AND ANALYTICS BIG DATA IN ENTERPRISE MANAGEMENT MODELS AND PRACTICES BIG DATA IN GOVERNMENT MANAGEMENT MODELS AND PRACTICES AND BIG DATA IN SMART PLANET SOLUTIONS MECHANICAL DESIGN INCLUDES AN OPTIMIZATION PROCESS IN WHICH DESIGNERS ALWAYS CONSIDER OBJECTIVES SUCH AS STRENGTH DEFLECTION WEIGHT WEAR CORROSION ETC DEPENDING ON THE REQUIREMENTS HOWEVER DESIGN OPTIMIZATION FOR A COMPLETE MECHANICAL ASSEMBLY LEADS TO A COMPLICATED OBJECTIVE FUNCTION WITH A LARGE NUMBER OF DESIGN VARIABLES IT IS A GOOD PRACTICE TO APPLY OPTIMIZATION TECHNIQUES FOR INDIVIDUAL COMPONENTS OR INTERMEDIATE ASSEMBLIES THAN A COMPLETE ASSEMBLY ANALYTICAL OR NUMERICAL METHODS FOR CALCULATING THE EXTREME VALUES OF A FUNCTION MAY PERFORM WELL IN MANY PRACTICAL CASES BUT MAY FAIL IN MORE COMPLEX DESIGN SITUATIONS IN REAL DESIGN PROBLEMS THE NUMBER OF DESIGN PARAMETERS CAN BE VERY LARGE AND THEIR INFLUENCE ON THE VALUE TO BE OPTIMIZED THE GOAL FUNCTION CAN BE VERY COMPLICATED HAVING NONLINEAR CHARACTER IN THESE COMPLEX CASES ADVANCED OPTIMIZATION ALGORITHMS OFFER SOLUTIONS TO THE PROBLEMS BECAUSE THEY FIND A SOLUTION NEAR TO THE GLOBAL OPTIMUM WITHIN REASONABLE TIME AND COMPUTATIONAL COSTS MECHANICAL DESIGN OPTIMIZATION USING ADVANCED OPTIMIZATION TECHNIQUES PRESENTS A COMPREHENSIVE REVIEW ON LATEST RESEARCH AND DEVELOPMENT TRENDS FOR DESIGN OPTIMIZATION OF MECHANICAL ELEMENTS AND DEVICES USING EXAMPLES OF VARIOUS MECHANICAL ELEMENTS AND DEVICES THE POSSIBILITIES FOR DESIGN OPTIMIZATION WITH ADVANCED OPTIMIZATION TECHNIQUES ARE DEMONSTRATED BASIC AND ADVANCED CONCEPTS OF TRADITIONAL AND ADVANCED OPTIMIZATION TECHNIQUES ARE PRESENTED ALONG WITH REAL CASE STUDIES RESULTS OF APPLICATIONS OF THE PROPOSED TECHNIQUES AND THE BEST OPTIMIZATION STRATEGIES TO ACHIEVE BEST PERFORMANCE ARE HIGHLIGHTED FURTHERMORE A NOVEL ADVANCED OPTIMIZATION METHOD NAMED TEACHING LEARNING BASED

OPTIMIZATION TLBO IS PRESENTED IN THIS BOOK AND THIS METHOD SHOWS BETTER PERFORMANCE WITH LESS COMPUTATIONAL EFFORT FOR THE LARGE SCALE PROBLEMS MECHANICAL DESIGN OPTIMIZATION USING ADVANCED OPTIMIZATION TECHNIQUES IS INTENDED FOR DESIGNERS PRACTITIONERS MANAGERS INSTITUTES INVOLVED IN DESIGN RELATED PROJECTS APPLIED RESEARCH WORKERS ACADEMICS AND GRADUATE STUDENTS IN MECHANICAL AND INDUSTRIAL ENGINEERING AND WILL BE USEFUL TO THE INDUSTRIAL PRODUCT DESIGNERS FOR REALIZING A PRODUCT AS IT PRESENTS NEW MODELS AND OPTIMIZATION TECHNIQUES TO MAKE TASKS EASIER LOGICAL EFFICIENT AND EFFECTIVE THE INTERNATIONAL CONFERENCE ON INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT IS SPONSORED BY THE CHINESE INDUSTRIAL ENGINEERING INSTITUTION CMES WHICH IS THE ONLY NATIONAL LEVEL ACADEMIC SOCIETY FOR INDUSTRIAL ENGINEERING THE CONFERENCE IS HELD ANNUALLY AS THE MAJOR EVENT IN THIS ARENA BEING THE LARGEST AND THE MOST AUTHORITATIVE INTERNATIONAL ACADEMIC CONFERENCE HELD IN CHINA IT PROVIDES AN ACADEMIC PLATFORM FOR EXPERTS AND ENTREPRENEURS IN THE AREAS OF INTERNATIONAL INDUSTRIAL ENGINEERING AND MANAGEMENT TO EXCHANGE THEIR RESEARCH FINDINGS MANY EXPERTS IN VARIOUS FIELDS FROM CHINA AND AROUND THE WORLD GATHER TOGETHER AT THE CONFERENCE TO REVIEW EXCHANGE SUMMARIZE AND PROMOTE THEIR ACHIEVEMENTS IN THE FIELDS OF INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT FOR EXAMPLE SOME EXPERTS PAY SPECIAL ATTENTION TO THE CURRENT STATE OF THE APPLICATION OF RELATED TECHNIQUES IN CHINA AS WELL AS THEIR FUTURE PROSPECTS SUCH AS GREEN PRODUCT DESIGN QUALITY CONTROL AND MANAGEMENT SUPPLY CHAIN AND LOGISTICS MANAGEMENT TO ADDRESS THE NEED FOR AMONGST OTHER THINGS LOW CARBON ENERGY SAVING AND EMISSION REDUCTION THEY ALSO OFFER OPINIONS ON THE OUTLOOK FOR THE DEVELOPMENT OF RELATED TECHNIQUES THE PROCEEDINGS OFFERS IMPRESSIVE METHODS AND CONCRETE APPLICATIONS FOR EXPERTS FROM COLLEGES AND UNIVERSITIES RESEARCH INSTITUTIONS AND ENTERPRISES WHO ARE ENGAGED IN THEORETICAL RESEARCH INTO INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT AND ITS APPLICATIONS AS ALL THE PAPERS ARE OF GREAT VALUE FROM BOTH AN ACADEMIC AND A PRACTICAL POINT OF VIEW THEY ALSO PROVIDE RESEARCH DATA FOR INTERNATIONAL SCHOLARS WHO ARE INVESTIGATING CHINESE STYLE ENTERPRISES AND ENGINEERING MANAGEMENT INDUSTRIAL ENGINEERING AFFECTS ALL LEVELS OF SOCIETY WITH INNOVATIONS IN MANUFACTURING AND OTHER FORMS OF ENGINEERING OFTENTIMES SPAWNING CULTURAL OR EDUCATIONAL SHIFTS ALONG WITH NEW TECHNOLOGIES INDUSTRIAL ENGINEERING CONCEPTS METHODOLOGIES TOOLS AND APPLICATIONS SERVES AS A VITAL COMPENDIUM OF RESEARCH DETAILING THE LATEST RESEARCH THEORIES AND CASE STUDIES ON INDUSTRIAL ENGINEERING BRINGING TOGETHER CONTRIBUTIONS FROM AUTHORS AROUND THE WORLD THIS THREE VOLUME COLLECTION REPRESENTS THE MOST SOPHISTICATED RESEARCH AND DEVELOPMENTS FROM THE FIELD OF INDUSTRIAL ENGINEERING AND WILL PROVE A VALUABLE RESOURCE FOR RESEARCHERS ACADEMICS AND PRACTITIONERS ALIKE THIS BOOK FOCUSES ON THE IMPLEMENTATION EVALUATION AND APPLICATION OF DNA RNA BASED GENETIC ALGORITHMS IN CONNECTION WITH NEURAL NETWORK MODELING FUZZY CONTROL THE Q LEARNING ALGORITHM AND CNN DEEP LEARNING CLASSIFIER IT PRESENTS SEVERAL DNA RNA BASED GENETIC ALGORITHMS AND THEIR MODIFICATIONS WHICH ARE TESTED USING BENCHMARKS AS WELL AS DETAILED INFORMATION ON THE IMPLEMENTATION STEPS AND PROGRAM CODE IN ADDITION TO SINGLE OBJECTIVE OPTIMIZATION HERE GENETIC ALGORITHMS ARE ALSO USED TO SOLVE MULTI OBJECTIVE OPTIMIZATION FOR NEURAL NETWORK MODELING FUZZY CONTROL MODEL PREDICTIVE CONTROL AND PID CONTROL IN CLOSING NEW TOPICS SUCH AS Q LEARNING AND CNN ARE INTRODUCED THE BOOK OFFERS A VALUABLE REFERENCE GUIDE FOR RESEARCHERS AND DESIGNERS IN SYSTEM MODELING AND CONTROL AND FOR SENIOR UNDERGRADUATE AND GRADUATE STUDENTS AT COLLEGES AND UNIVERSITIES THIS BOOK OFFERS A TIMELY REVIEW OF CUTTING EDGE APPLICATIONS OF COMPUTATIONAL INTELLIGENCE TO BUSINESS MANAGEMENT AND FINANCIAL ANALYSIS IT COVERS A WIDE RANGE OF INTELLIGENT AND OPTIMIZATION TECHNIQUES REPORTING IN DETAIL ON THEIR APPLICATION TO REAL WORLD PROBLEMS RELATING TO PORTFOLIO MANAGEMENT AND DEMAND FORECASTING DECISION MAKING KNOWLEDGE ACQUISITION AND SUPPLY CHAIN SCHEDULING AND MANAGEMENT THIS BOOK IS FOR THOSE WHO USE DATA ANALYSIS TO BUILD DECISION SUPPORT SYSTEMS PARTICULARLY ENGINEERS SCIENTISTS AND STATISTICIANS PROVIDED BY PUBLISHER THIS VOLUME PROVIDES UPDATED IN DEPTH MATERIAL ON THE APPLICATION OF INTELLIGENT OPTIMIZATION IN BIOLOGY AND MEDICINE THE AIM OF THE BOOK IS TO PRESENT SOLUTIONS TO THE CHALLENGES AND PROBLEMS FACING BIOLOGY AND MEDICINE APPLICATIONS THIS VOLUME COMPRISES OF 13 CHAPTERS INCLUDING AN OVERVIEW CHAPTER PROVIDING AN UP TO DATE AND STATE OF THE RESEARCH ON THE APPLICATION OF INTELLIGENT OPTIMIZATION FOR BIOINFORMATICS APPLICATIONS DNA BASED STEGANOGRAPHY A MODIFIED PARTICLE SWARM OPTIMIZATION ALGORITHM FOR SOLVING CAPACITATED MAXIMAL COVERING LOCATION PROBLEM IN HEALTHCARE SYSTEMS OPTIMIZATION METHODS FOR MEDICAL IMAGE SUPER RESOLUTION RECONSTRUCTION AND BREAST CANCER CLASSIFICATION MOREOVER SOME CHAPTERS THAT DESCRIBE SEVERAL BIO INSPIRED APPROACHES IN MEDLINE TEXT MINING DNA BINDING PROTEINS AND CLASSES OPTIMIZED TUMOR BREAST CANCER CLASSIFICATION USING COMBINING RANDOM SUBSPACE AND STATIC CLASSIFIERS SELECTION PARADIGMS AND DENTAL IMAGE REGISTRATION THE BOOK WILL BE A USEFUL COMPENDIUM FOR A BROAD RANGE OF READERS

FROM STUDENTS OF UNDERGRADUATE TO POSTGRADUATE LEVELS AND ALSO FOR RESEARCHERS PROFESSIONALS ETC WHO WISH TO ENRICH THEIR KNOWLEDGE ON INTELLIGENT OPTIMIZATION IN BIOLOGY AND MEDICINE AND APPLICATIONS WITH ONE SINGLE BOOK THIS BOOK AND ITS SISTER VOLUMES I E LNCS VOLS 3610 3611 AND 3612 ARE THE PROCEEDINGS OF THE 1ST INTERNATIONAL CONFERENCE ON NATURAL COMPUTATION ICNC 2005 JOINTLY HELD WITH THE 2ND INTERNATIONAL CONFERENCE ON FUZZY SYSTEMS AND KNOWLEDGE DISCOVERY FSKD 2005 LNAI VOLS 3613 AND 3614 FROM 27 TO 29 AUGUST 2005 IN CHANGSHA HUNAN CHINA THIS IS AN OPEN ACCESS BOOK AS A LEADING ROLE IN THE GLOBAL MEGATREND OF SCIENTIFIC INNOVATION CHINA HAS BEEN CREATING A MORE AND MORE OPEN ENVIRONMENT FOR SCIENTIFIC INNOVATION INCREASING THE DEPTH AND BREADTH OF ACADEMIC COOPERATION AND BUILDING A COMMUNITY OF INNOVATION THAT BENEFITS ALL THESE ENDEAVORS HAVE MADE NEW CONTRIBUTION TO GLOBALIZATION AND CREATING A COMMUNITY OF SHARED FUTURE TO ADAPT TO THIS CHANGING WORLD AND CHINA S FAST DEVELOPMENT IN THIS NEW AREA THE 2ND INTERNATIONAL CONFERENCE ON INTERNET EDUCATION AND INFORMATION TECHNOLOGY IEIT 2022 IS TO BE HELD IN APRIL 15 17 2022 THIS CONFERENCE TAKES BRINGING TOGETHER GLOBAL WISDOM IN SCIENTIFIC INNOVATION TO PROMOTE HIGH QUALITY DEVELOPMENT AS THE THEME AND FOCUSES ON RESEARCH FIELDS INCLUDING INFORMATION TECHNOLOGY EDUCATION BIG DATA AND INTERNET THIS CONFERENCE AIMS TO EXPAND CHANNELS OF INTERNATIONAL ACADEMIC EXCHANGE IN SCIENCE AND TECHNOLOGY BUILD A SHARING PLATFORM OF ACADEMIC RESOURCES PROMOTE SCIENTIFIC INNOVATION ON THE GLOBAL SCALE IMPROVE ACADEMIC COOPERATION BETWEEN CHINA AND THE OUTSIDE WORLD IT ALSO AIMS TO ENCOURAGE EXCHANGE OF INFORMATION ON RESEARCH FRONTIERS IN DIFFERENT FIELDS CONNECT THE MOST ADVANCED ACADEMIC RESOURCES IN CHINA AND ABROAD TURN RESEARCH RESULTS INTO INDUSTRIAL SOLUTIONS BRING TOGETHER TALENTS TECHNOLOGIES AND CAPITAL TO BOOST DEVELOPMENT THIS VOLUME COMPRISES THE SELECT PEER REVIEWED PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ADVANCES AND APPLICATIONS OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING 2022 ICAAAIML 2022 IT AIMS TO PROVIDE A COMPREHENSIVE AND BROAD SPECTRUM PICTURE OF STATE OF THE ART RESEARCH AND DEVELOPMENT IN THE AREAS OF ARTIFICIAL INTELLIGENCE MACHINE LEARNING DEEP LEARNING AND THEIR ADVANCED APPLICATIONS IN COMPUTER VISION AND BLOCKCHAIN IT ALSO COVERS RESEARCH IN CORE CONCEPTS OF COMPUTERS INTELLIGENT SYSTEM DESIGN AND DEPLOYMENT REAL TIME SYSTEMS WSN SENSORS AND SENSOR NODES SOFTWARE ENGINEERING IMAGE PROCESSING AND CLOUD COMPUTING THIS VOLUME WILL PROVIDE A VALUABLE RESOURCE FOR THOSE IN ACADEMIA AND INDUSTRY

Hybrid Evolutionary Algorithms 2007-08-29 this edited volume is targeted at presenting the latest state of the art methodologies in hybrid evolutionary algorithms the chapters deal with the theoretical and methodological aspects as well as various applications to many real world problems from science technology business or commerce overall the book has 14 chapters including an introductory chapter giving the fundamental definitions and some important research challenges the contributions were selected on the basis of fundamental ideas concepts rather than the thoroughness of techniques deployed

Multi-Objective Optimization 2018-08-18 this book brings together the latest findings on efficient solutions of multi many objective optimization problems from the leading researchers in the field the focus is on solving real world optimization problems using strategies ranging from evolutionary to hybrid frameworks and involving various computation platforms the topics covered include solution frameworks using evolutionary to hybrid models in application areas like analytics cancer research traffic management networks and communications e governance quantum technology image processing etc as such the book offers a valuable resource for all postgraduate students and researchers interested in exploring solution frameworks for multi many objective optimization problems

Intelligent Hybrid Systems 2012-12-06 intelligent hybrid systems fuzzy logic neural networks and genetic algorithms is an organized edited collection of contributed chapters covering basic principles methodologies and applications of fuzzy systems neural networks and genetic algorithms all chapters are original contributions by leading researchers written exclusively for this volume this book reviews important concepts and models and focuses on specific methodologies common to fuzzy systems neural networks and evolutionary computation the emphasis is on development of cooperative models of hybrid systems included are applications related to intelligent data analysis process analysis intelligent adaptive information systems systems identification nonlinear systems power and water system design and many others intelligent hybrid systems fuzzy logic neural networks and genetic algorithms provides researchers and engineers with up to date coverage of new results methodologies and applications for building intelligent systems capable of solving large scale problems

New Hybrid Variants of Genetic Algorithms 2003 this book deals with the fundamentals of genetic algorithms and their applications in a variety of different areas of engineering and science most significant update to the second edition is the matlab codes that accompany the text provides a thorough discussion of hybrid genetic algorithms features more examples than first edition

Practical Genetic Algorithms 2004-07-30 in this paper we present a hybrid intelligent system based on neutrosophic logic nl in conjunction with genetic algorithm ga for classification the neutrosophic logic is adapted for representing different forms of knowledge ga is used to refine the generated neutrosophic rules the performance of the proposed system is tested on three real world databases iris wine and wisconsin diagnostic breast cancer wdbc in a series of experiments we compare the performance of the proposed genetic neutrosophic rule based classification system with that of the neutrosophic rule based classification system the performance of both classifiers is measured for the three real world data sets we have reached an average accuracy 98 39 in genetic neutrosophic against 94 78 for the corresponding neutrosophic

GNRCS: Hybrid Classification System based on Neutrosophic Logic and Genetic Algorithm 2007-10-24 this book offers a basic introduction to genetic algorithms it provides a detailed explanation of genetic algorithm concepts and examines numerous genetic algorithm optimization problems in addition the book presents implementation of optimization problems using c and c as well as simulated solutions for genetic algorithm problems using matlab 7 0 it also includes application case studies on genetic algorithms in emerging fields

Introduction to Genetic Algorithms 2012-10-01 multiobjective resource management problems m rmp involves deciding how to divide a resource of limited availability among multiple demands in a way that optimizes current objectives rmp is widely used to plan the optimal allocating or management resources process among various projects or business units for the maximum product and the minimum cost resources might be manpower assets raw materials capital or anything else in limited supply the solution method of rmp however has its own problems this book identifies four of them along

WITH THE PROPOSED METHODS TO SOLVE THEM MATHEMATICAL MODELS COMBINED WITH EFFECTIVE MULTISTAGE GENETIC ALGORITHM GA APPROACH HELP TO DEVELOP A METHOD FOR HANDLING THE M RMP THE PROPOSED APPROACH NOT ONLY CAN SOLVE RELATIVELY LARGE SIZE PROBLEMS BUT ALSO HAS BETTER PERFORMANCE THAN THE CONVENTIONAL GA AND THE PROPOSED METHOD PROVIDES MORE FLEXIBILITY TO M RMP MODEL WHICH IS THE KEY TO SURVIVE UNDER SEVERELY COMPETITIVE ENVIRONMENT WE ALSO BELIEVE THAT THE PROPOSED METHOD CAN BE ADAPTED TO OTHER PRODUCTION DISTRIBUTION PLANNING AND ALL M RAP MODELS IN THIS BOOK FOUR PROBLEMS WITH M RMP MODELS WILL BE CLEARLY OUTLINED AND A MULTISTAGE HYBRIDIZED GA METHOD FOR FINDING THE BEST SOLUTION IS THEN IMPLEMENTED COMPARISON RESULTS WITH THE CONVENTIONAL GA METHODS ARE ALSO PRESENTED THIS BOOK ALSO MENTIONS SEVERAL USEFUL COMBINATORIAL OPTIMIZATION MODELS IN PROCESS SYSTEM AND PROPOSED EFFECTIVE SOLUTION METHODS BY USING MULTISTAGE GA NOTE PART OF THIS BOOK ONCE PUBLISHED IN INTERNATIONAL JOURNALS SCI SCIENCE DIRECT INSIDE BE ACCEPTED HAVE FIVE ARTICLES

Multiobjective Resource Allocation Problems By Multistage Hybrid Genetic Algorithm 2001 IN THIS PAPER A MODEL BASED DIAGNOSTIC METHOD WHICH UTILIZES NEURAL NETWORKS AND GENETIC ALGORITHMS IS INVESTIGATED NEURAL NETWORKS ARE APPLIED TO ESTIMATE THE ENGINE INTERNAL HEALTH AND GENETIC ALGORITHMS ARE APPLIED FOR SENSOR BIAS DETECTION AND ESTIMATION THIS HYBRID APPROACH TAKES ADVANTAGE OF THE NONLINEAR ESTIMATION CAPABILITY PROVIDED BY NEURAL NETWORKS WHILE IMPROVING THE ROBUSTNESS TO MEASUREMENT UNCERTAINTY THROUGH THE APPLICATION OF GENETIC ALGORITHMS THE HYBRID DIAGNOSTIC TECHNIQUE ALSO HAS THE ABILITY TO RANK MULTIPLE POTENTIAL SOLUTIONS FOR A GIVEN SET OF ANOMALOUS SENSOR MEASUREMENTS IN ORDER TO REDUCE FALSE ALARMS AND MISSED DETECTIONS THE PERFORMANCE OF THE HYBRID DIAGNOSTIC TECHNIQUE IS EVALUATED THROUGH SOME CASE STUDIES DERIVED FROM A TURBOFAN ENGINE SIMULATION THE RESULTS SHOW THIS APPROACH IS PROMISING FOR RELIABLE DIAGNOSTICS OF AIRCRAFT ENGINES

A Hybrid Neural Network-Genetic Algorithm Technique for Aircraft Engine Performance Diagnostics 1995 THIS BOOK PROVIDES A DEFINITION OF HYBRID SYSTEMS SUMMARIZES THE CURRENT STATE OF THE ART AND PRESENTS CONTRIBUTIONS THAT DETAIL INNOVATIVE METHODS FOR INTEGRATING DIFFERENT INTELLIGENT TECHNIQUES THE BOOK IS INTENDED TO EQUIP RESEARCHERS APPLICATIONS DEVELOPERS AND MANAGERS WITH KEY REFERENCE AND RESOURCE MATERIAL FOR THE SUCCESSFUL DEVELOPMENT OF HYBRID SYSTEMS

Intelligent Hybrid Systems 2012 GENETIC ALGORITHMS GA HAVE BECOME POPULAR TOOLS FOR SEARCH OPTIMIZATION MACHINE LEARNING AND SOLVING DESIGN PROBLEMS THESE ALGORITHMS USE SIMULATED EVOLUTION TO SEARCH FOR SOLUTIONS TO COMPLEX PROBLEMS A GA IS A POPULATION BASED COMPUTATIONAL METHOD IN WHICH THE POPULATION USING RANDOMIZED PROCESSES OF SELECTION CROSSOVER AND MUTATION EVOLVES TOWARDS BETTER SOLUTIONS IN THIS BOOK THE AUTHORS PRESENT CURRENT RESEARCH INCLUDING THE APPLICATION OF GENETIC ALGORITHM OPTIMIZATION TECHNIQUES IN BEAM STEERING OF CIRCULAR ARRAY ANTENNA HYBRID GENETIC ALGORITHMS CHANGING RANGE GENETIC ALGORITHMS STUDY OF THE INFLUENCE OF FOREST CANOPIES ON THE ACCURACY OF GPS MEASUREMENTS USING GENETIC ALGORITHMS ROUNDNESS EVALUATION BY GENETIC ALGORITHM AND OPTIMAL SIZING OF ANALOGUE INTEGRATED CIRCUITS BY APPLYING GENETIC ALGORITHMS

Handbook of Genetic Algorithms 2012-12-06 HYBRID INTELLIGENT SYSTEMS SUMMARIZES THE STRENGTHS AND WEAKNESSES OF FIVE INTELLIGENT TECHNOLOGIES FUZZY LOGIC GENETIC ALGORITHMS CASE BASED REASONING NEURAL NETWORKS AND EXPERT SYSTEMS REVIEWING THE STATUS AND SIGNIFICANCE OF RESEARCH INTO THEIR INTEGRATION ENGINEERING AND SCIENTIFIC EXAMPLES AND CASE STUDIES ARE USED TO ILLUSTRATE PRINCIPLES AND APPLICATION DEVELOPMENT TECHNIQUES THE READER WILL GAIN A CLEAR IDEA OF THE CURRENT STATUS OF HYBRID INTELLIGENT SYSTEMS AND DISCOVER HOW TO CHOOSE AND DEVELOP APPROPRIATE APPLICATIONS THE BOOK IS BASED ON A THOROUGH LITERATURE SEARCH OF RECENT PUBLICATIONS ON RESEARCH AND DEVELOPMENT IN HYBRID INTELLIGENT SYSTEMS THE RESULTING 50 PAGE REFERENCE SECTION OF THE BOOK IS INVALUABLE THE BOOK STARTS WITH A SUMMARY OF THE FIVE MAJOR INTELLIGENT TECHNOLOGIES AND OF THE ISSUES IN AND CURRENT STATUS OF RESEARCH INTO THEM EACH SUBSEQUENT CHAPTER PRESENTS A DETAILED DISCUSSION OF A DIFFERENT COMBINATION OF INTELLIGENT TECHNOLOGIES ALONG WITH EXAMPLES AND CASE STUDIES FOUR CHAPTERS CONTAIN DETAILED CASE STUDIES OF WORKING HYBRID SYSTEMS THE BOOK ENABLES THE READER TO DESCRIBE THE IMPORTANT CONCEPTS STRENGTHS AND LIMITATIONS OF EACH TECHNOLOGY RECOGNIZE AND ANALYZE POTENTIAL PROBLEMS WITH THE APPLICATION OF HYBRID SYSTEMS CHOOSE APPROPRIATE HYBRID INTELLIGENT SOLUTIONS UNDERSTAND HOW APPLICATIONS ARE DESIGNED WITH ANY OF THE APPROACHES COVERED CHOOSE APPROPRIATE COMMERCIAL DEVELOPMENT SHELLS OR TOOLS AN INVALUABLE REFERENCE SOURCE FOR THOSE WHO WISH TO APPLY INTELLIGENT SYSTEMS TECHNIQUES TO THEIR OWN PROBLEMS

Hybrid Intelligent Systems 2013-12-31 we are pleased to welcome readers to this issue of the journal of applied operational research jaor volume 3 number 2 the journal reports on developments in all aspects of operational research including the latest advances and applications it is a primarily goal of the journal to focus on and publish practical case studies which illustrate real life applications

Intelligent Control 2011-08-31 fast advances in information technology have led to a smarter world vision with ubiquitous interconnection and intelligence smart manufacturing innovation and transformation interconnection and intelligence covers both theoretical perspectives and practical approaches to smart manufacturing research and development triggered by ubiquitous interconnection and intelligence this reference work discusses the transformation of manufacturing the latest developments in smart manufacturing innovation current and emerging technology opportunities and market imperatives that enable manufacturing innovation and transformation useful tools for readers in industry academia and government

Journal of Applied Operational Research 2014-03-31 this book includes high quality research papers presented at the sixth international conference on innovative computing and communication icicc 2023 which is held at the shaheed sukhdev college of business studies university of delhi delhi india on february 17 18 2023 introducing the innovative works of scientists professors research scholars students and industrial experts in the field of computing and communication the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real time applications

Smart Manufacturing Innovation and Transformation: Interconnection and Intelligence 2023-07-31 combinatorial optimization is the process of finding the best or optimal so lution for problems with a discrete set of feasible solutions applications arise in numerous settings involving operations management and logistics such as routing scheduling packing inventory and production management lo cation logic and assignment of resources the economic impact of combi natorial optimization is profound affecting sectors as diverse as transporta tion airlines trucking rail and shipping forestry manufacturing logistics aerospace energy electrical power petroleum and natural gas telecommu nications biotechnology financial services and agriculture while much progress has been made in finding exact provably optimal so lutions to some combinatorial optimization problems using techniques such as dynamic programming cutting planes and branch and cut methods many hard combinatorial problems are still not solved exactly and require good heuristic methods moreover reaching optimal solutions is in many cases meaningless as in practice we are often dealing with models that are rough simplifications of reality the aim of heuristic methods for combinatorial op timization is to quickly produce good quality solutions without necessarily providing any guarantee of solution quality metaheuristics are high level procedures that coordinate simple heuristics such as local search to find solu tions that are of better quality than those found by the simple heuristics alone modem metaheuristics include simulated annealing genetic algorithms tabu search grasp scatter search ant colony optimization variable neighborhood search and their hybrids

International Conference on Innovative Computing and Communications 2003-11-30 genetic programming is a new and evolutionary method that has become a novel area of research within artificial intelligence known for automatically generating high quality solutions to optimization and search problems this automatic aspect of the algorithms and the mimicking of natural selection and genetics makes genetic programming an intelligent component of problem solving that is highly regarded for its efficiency and vast capabilities with the ability to be modified and adapted easily distributed and effective in large scale wide variety of problems genetic algorithms and programming can be utilized in many diverse industries this multi industry uses vary from finance and economics to business and management all the way to healthcare and the sciences the use of genetic programming and algorithms goes beyond human capabilities enhancing the business and processes of various essential industries and improving functionality along the way the research anthology on multi industry uses of genetic programming and algorithms covers the implementation tools and technologies and impact on society that genetic programming and algorithms have had throughout multiple industries by taking a multi industry approach this book covers the fundamentals of genetic programming through its technological benefits and challenges along with the latest advancements and future outlooks for computer science this book is ideal for academicians biological engineers computer programmers scientists researchers and upper level students seeking

THE LATEST RESEARCH ON GENETIC PROGRAMMING

METAHEURISTICS 2020-12-05 THIS BOOK PROVIDES A HIGHLY ACCESSIBLE INTRODUCTION TO EVOLUTIONARY COMPUTATION IT DETAILS BASIC CONCEPTS HIGHLIGHTS SEVERAL APPLICATIONS OF EVOLUTIONARY COMPUTATION AND INCLUDES SOLVED PROBLEMS USING MATLAB SOFTWARE AND C C THIS BOOK ALSO OUTLINES SOME IDEAS ON WHEN GENETIC ALGORITHMS AND GENETIC PROGRAMMING SHOULD BE USED THE MOST DIFFICULT PART OF USING A GENETIC ALGORITHM IS HOW TO ENCODE THE POPULATION AND THE AUTHOR DISCUSSES VARIOUS WAYS TO DO THIS

RESEARCH ANTHOLOGY ON MULTI-INDUSTRY USES OF GENETIC PROGRAMMING AND ALGORITHMS 2008-01-03 OPTIMIZATION TECHNIQUES HAVE DEVELOPED INTO A MODERN DAY SOLUTION FOR REAL WORLD PROBLEMS IN VARIOUS INDUSTRIES AS A WAY TO IMPROVE PERFORMANCE AND HANDLE ISSUES OF UNCERTAINTY OPTIMIZATION RESEARCH BECOMES A TOPIC OF SPECIAL INTEREST ACROSS DISCIPLINES PROBLEM SOLVING AND UNCERTAINTY MODELING THROUGH OPTIMIZATION AND SOFT COMPUTING APPLICATIONS PRESENTS THE LATEST RESEARCH TRENDS AND DEVELOPMENTS IN THE AREA OF APPLIED OPTIMIZATION METHODOLOGIES AND SOFT COMPUTING TECHNIQUES FOR SOLVING COMPLEX PROBLEMS TAKING A MULTI DISCIPLINARY APPROACH THIS CRITICAL PUBLICATION IS AN ESSENTIAL REFERENCE SOURCE FOR ENGINEERS MANAGERS RESEARCHERS AND POST GRADUATE STUDENTS

EVOLUTIONARY INTELLIGENCE 2016-03-01 ANNOTATION PROCEEDINGS FROM THE FIRST INTERNATIONAL CONFERENCE ON INVERSE PROBLEMS RECENT THEORETICAL DEVELOPMENT AND NUMERICAL APPROACHES HELD AT THE CITY UNIVERSITY OF HONG KONG FROM JANUARY 9 12 2002

PROBLEM SOLVING AND UNCERTAINTY MODELING THROUGH OPTIMIZATION AND SOFT COMPUTING APPLICATIONS 2003 IN RECENT YEARS GENETIC ALGORITHMS GA AND ARTIFICIAL NEURAL NETWORKS ANN HAVE PROGRESSIVELY INCREASED IN IMPORTANCE AMONGST THE TECHNIQUES ROUTINELY USED IN CHEMOMETRICS THIS BOOK CONTAINS CONTRIBUTIONS FROM EXPERTS IN THE FIELD IS DIVIDED IN TWO SECTIONS GA AND ANN IN EACH PART TUTORIAL CHAPTERS ARE INCLUDED IN WHICH THE THEORETICAL BASES OF EACH TECHNIQUE ARE EXPERTLY BUT SIMPLY DESCRIBED THESE ARE FOLLOWED BY APPLICATION CHAPTERS IN WHICH SPECIAL EMPHASIS WILL BE GIVEN TO THE ADVANTAGES OF THE APPLICATION OF GA OR ANN TO THAT SPECIFIC PROBLEM COMPARED TO CLASSICAL TECHNIQUES AND TO THE RISKS CONNECTED WITH ITS MISUSE THIS BOOK IS OF USE TO ALL THOSE WHO ARE USING OR ARE INTERESTED IN GA AND ANN BEGINNERS CAN FOCUS THEIR ATTENTIONS ON THE TUTORIALS WHILST THE MOST ADVANCED READERS WILL BE MORE INTERESTED IN LOOKING AT THE APPLICATIONS OF THE TECHNIQUES IT IS ALSO SUITABLE AS A REFERENCE BOOK FOR STUDENTS SUBJECT MATTER IS STEADILY INCREASING IN IMPORTANCE COMPARISON OF GENETIC ALGORITHMS GA AND ARTIFICIAL NEURAL NETWORKS ANN WITH THE CLASSICAL TECHNIQUES SUITABLE FOR BOTH BEGINNERS AND ADVANCED RESEARCHERS

RECENT DEVELOPMENT IN THEORIES & NUMERICS 2003-12-03 THIS BOOK PROVIDES COMPREHENSIVE INTRODUCTION TO A CONSORTIUM OF TECHNOLOGIES UNDERLYING SOFT COMPUTING AN EVOLVING BRANCH OF COMPUTATIONAL INTELLIGENCE THE CONSTITUENT TECHNOLOGIES DISCUSSED COMPRISE NEURAL NETWORKS FUZZY LOGIC GENETIC ALGORITHMS AND A NUMBER OF HYBRID SYSTEMS WHICH INCLUDE CLASSES SUCH AS NEURO FUZZY FUZZY GENETIC AND NEURO GENETIC SYSTEMS THE HYBRIDIZATION OF THE TECHNOLOGIES IS DEMONSTRATED ON ARCHITECTURES SUCH AS FUZZY BACK PROPAGATION NETWORKS NN FL SIMPLIFIED FUZZY ARTMAP NN FL AND FUZZY ASSOCIATIVE MEMORIES THE BOOK ALSO GIVES AN EXHAUSTIVE DISCUSSION OF FL GA HYBRIDIZATION EVERY ARCHITECTURE HAS BEEN DISCUSSED IN DETAIL THROUGH ILLUSTRATIVE EXAMPLES AND APPLICATIONS THE ALGORITHMS HAVE BEEN PRESENTED IN PSEUDO CODE WITH A STEP BY STEP ILLUSTRATION OF THE SAME IN PROBLEMS THE APPLICATIONS DEMONSTRATIVE OF THE POTENTIAL OF THE ARCHITECTURES HAVE BEEN CHOSEN FROM DIVERSE DISCIPLINES OF SCIENCE AND ENGINEERING THIS BOOK WITH A WEALTH OF INFORMATION THAT IS CLEARLY PRESENTED AND ILLUSTRATED BY MANY EXAMPLES AND APPLICATIONS IS DESIGNED FOR USE AS A TEXT FOR COURSES IN SOFT COMPUTING AT BOTH THE SENIOR UNDERGRADUATE AND FIRST YEAR POST GRADUATE ENGINEERING LEVELS IT SHOULD ALSO BE OF INTEREST TO RESEARCHERS AND TECHNOLOGISTS DESIROUS OF APPLYING SOFT COMPUTING TECHNOLOGIES TO THEIR RESPECTIVE FIELDS OF WORK

NATURE-INSPIRED METHODS IN CHEMOMETRICS: GENETIC ALGORITHMS AND ARTIFICIAL NEURAL NETWORKS 2003-01-01 IN RECENT YEARS OUR WORLD HAS EXPERIENCED A PROFOUND SHIFT AND PROGRESSION IN AVAILABLE COMPUTING AND KNOWLEDGE SHARING INNOVATIONS THESE EMERGING ADVANCEMENTS HAVE DEVELOPED AT A RAPID PACE DISSEMINATING INTO AND AFFECTING NUMEROUS ASPECTS OF CONTEMPORARY SOCIETY THIS HAS CREATED A PIVOTAL NEED FOR AN INNOVATIVE COMPENDIUM ENCOMPASSING THE LATEST TRENDS CONCEPTS AND ISSUES SURROUNDING THIS RELEVANT DISCIPLINE AREA DURING THE PAST 15 YEARS THE ENCYCLOPEDIA OF INFORMATION SCIENCE AND

TECHNOLOGY HAS BECOME RECOGNIZED AS ONE OF THE LANDMARK SOURCES OF THE LATEST KNOWLEDGE AND DISCOVERIES IN THIS DISCIPLINE THE ENCYCLOPEDIA OF INFORMATION SCIENCE AND TECHNOLOGY FOURTH EDITION IS A 10 VOLUME SET WHICH INCLUDES 705 ORIGINAL AND PREVIOUSLY UNPUBLISHED RESEARCH ARTICLES COVERING A FULL RANGE OF PERSPECTIVES APPLICATIONS AND TECHNIQUES CONTRIBUTED BY THOUSANDS OF EXPERTS AND RESEARCHERS FROM AROUND THE GLOBE THIS AUTHORITATIVE ENCYCLOPEDIA IS AN ALL ENCOMPASSING WELL ESTABLISHED REFERENCE SOURCE THAT IS IDEALLY DESIGNED TO DISSEMINATE THE MOST FORWARD THINKING AND DIVERSE RESEARCH FINDINGS WITH CRITICAL PERSPECTIVES ON THE IMPACT OF INFORMATION SCIENCE MANAGEMENT AND NEW TECHNOLOGIES IN MODERN SETTINGS INCLUDING BUT NOT LIMITED TO COMPUTER SCIENCE EDUCATION HEALTHCARE GOVERNMENT ENGINEERING BUSINESS AND NATURAL AND PHYSICAL SCIENCES IT IS A PIVOTAL AND RELEVANT SOURCE OF KNOWLEDGE THAT WILL BENEFIT EVERY PROFESSIONAL WITHIN THE FIELD OF INFORMATION SCIENCE AND TECHNOLOGY AND IS AN INVALUABLE ADDITION TO EVERY ACADEMIC AND CORPORATE LIBRARY

NEURAL NETWORKS, FUZZY LOGIC AND GENETIC ALGORITHM 2017-06-20 THIRD INTERNATIONAL CONFERENCE ON NUMBER THEORY AND SMARANDACHE PROBLEMS 23 25 MARCH 2007 WEINAN TEACHER S UNIVERSITY CHINA PAPERS ON SMARANDACHE MULTI SPACES AND MATHEMATICAL COMBINATORICS SMARANDACHE STEPPED FUNCTIONS CUBE FREE INTEGERS AS SUMS OF TWO SQUARES RECURRENCES FOR GENERALIZED EULER NUMBERS THE GENERALIZATION OF THE PRIMITIVE NUMBER FUNCTION THE SMARANDACHE LCM FUNCTION AND ITS MEAN VALUE A CONJECTURE INVOLVING THE F SMARANDACHE LCM FUNCTION A NEW ARITHMETICAL FUNCTION AND ITS ASYMPTOTIC FORMULA AND OTHER SIMILAR TOPICS CONTRIBUTORS J WANG A MUKTIBODH M SELARIU X ZHANG Y ZHANG M LIU R ZHANG S MA L MAO AND MANY OTHERS

Encyclopedia of Information Science and Technology, Fourth Edition 2007-09-12 THIS BOOK IS PART OF A THREE VOLUME SET THAT CONSTITUTES THE REFEREED PROCEEDINGS OF THE 11TH INTERNATIONAL CONFERENCE ON KNOWLEDGE BASED INTELLIGENT INFORMATION AND ENGINEERING SYSTEMS KES 2007 COVERAGE IN THIS FIRST VOLUME INCLUDES ARTIFICIAL NEURAL NETWORKS AND CONNECTIONISTS SYSTEMS FUZZY AND NEURO FUZZY SYSTEMS EVOLUTIONARY COMPUTATION MACHINE LEARNING AND CLASSICAL AI AGENT SYSTEMS AND INFORMATION ENGINEERING AND APPLICATIONS IN UBIQUITOUS COMPUTING ENVIRONMENTS

Scientia Magna, Vol. 3, No. 1, 2007. 2023-10-16 AMID THE DYNAMIC GROWTH OF ARTIFICIAL INTELLIGENCE THIS BOOK PRESENTS A COLLECTION OF FINDINGS AND ADVANCEMENTS FROM THE SECOND EDITION OF THE A2IA ARTIFICIAL INTELLIGENCE AND INDUSTRIAL APPLICATIONS CONFERENCE THE CONFERENCE HOSTED BY ENSAM MEKN? S AT MOULAY ISMAIL UNIVERSITY MOROCCO FOSTERS KNOWLEDGE EXCHANGE IN AI FOCUSING PRIMARILY ON ITS INDUSTRIAL APPLICATIONS COVERING A WIDE RANGE OF TOPICS THE BOOK HIGHLIGHTS THE ADAPTABLE NATURE OF AI AND ITS INCREASING IMPACT ON INDUSTRIAL SECTORS IT BRINGS TOGETHER CONTRIBUTIONS FROM AN INTERNATIONAL COHORT OF RESEARCHERS DISCUSSING THEMES SUCH AS INTELLIGENT MANUFACTURING AND MAINTENANCE INTELLIGENT SUPPLY CHAIN MANAGEMENT VARIOUS MODES OF LEARNING INCLUDING SUPERVISED UNSUPERVISED REINFORCEMENT SEMI SUPERVISED AND GRAPH BASED AS WELL AS NEURAL NETWORKS DEEP LEARNING PLANNING AND OPTIMIZATION A DEFINING FEATURE OF THIS EDITION IS ITS EXTENSIVE SCOPE AND EMPHASIS ON THE PRACTICAL APPLICATIONS OF AI ALONG WITH ITS FOUNDATIONAL ELEMENTS IT FACILITATES AN UNDERSTANDING OF AI S CURRENT STATE AND POTENTIAL FUTURE DIRECTION SHOWCASING RECENT DEVELOPMENTS THAT BRIDGE THE GAP BETWEEN THEORY AND PRACTICE DESIGNED FOR A DIVERSE READERSHIP THIS BOOK IS OF INTEREST TO AI PRACTITIONERS ACADEMICS AND ENTHUSIASTS AS WELL AS TO THOSE NEW TO THE FIELD IT PROVIDES AN OPPORTUNITY TO EXPLORE AI S CRITICAL ROLE IN INDUSTRIAL APPLICATIONS AND THE PRACTICAL INSIGHTS IT OFFERS ARE LIKELY TO BE BENEFICIAL FOR DECISION MAKING WITHIN INDUSTRIAL SETTINGS

Knowledge-Based Intelligent Information and Engineering Systems 2013-03-09 RESEARCHERS AND PRACTITIONERS ALIKE ARE INCREASINGLY TURNING TO SEARCH OP TIMIZATION AND MACHINE LEARNING PROCEDURES BASED ON NATURAL SELECTION AND NATURAL GENETICS TO SOLVE PROBLEMS ACROSS THE SPECTRUM OF HUMAN ENDEAVOR THESE GENETIC ALGORITHMS AND TECHNIQUES OF EVOLUTIONARY COMPUTATION ARE SOLV ING PROBLEMS AND INVENTING NEW HARDWARE AND SOFTWARE THAT RIVAL HUMAN DESIGNS THE KLUWER SERIES ON GENETIC ALGORITHMS AND EVOLUTIONARY COMPUTATION PUB LISHES RESEARCH MONOGRAPHS EDITED COLLECTIONS AND GRADUATE LEVEL TEXTS IN THIS RAPIDLY GROWING FIELD PRIMARY AREAS OF COVERAGE INCLUDE THE THEORY IMPLEMEN TATION AND APPLICATION OF GENETIC ALGORITHMS GAS EVOLUTION STRATEGIES ESS EVOLUTIONARY PROGRAMMING EP LEARNING CLASSIFIER SYSTEMS LCSS AND OTHER VARIANTS OF GENETIC AND EVOLUTIONARY COMPUTATION GEC THE SERIES ALSO PUB LISHES TEXTS IN RELATED FIELDS SUCH AS ARTIFICIAL LIFE ADAPTIVE BEHAVIOR ARTIFICIAL IMMUNE SYSTEMS AGENT BASED SYSTEMS NEURAL COMPUTING FUZZY SYSTEMS AND QUANTUM COMPUTING AS LONG AS GEC TECHNIQUES ARE PART OF OR INSPIRATION FOR THE SYSTEM BEING DESCRIBED THIS ENCYCLOPEDIC VOLUME ON THE USE

OF THE ALGORITHMS OF GENETIC AND EVOLU TIONARY COMPUTATION FOR THE SOLUTION OF MULTI OBJECTIVE PROBLEMS IS A LANDMARK ADDITION TO THE LITERATURE THAT COMES JUST IN THE NICK OF TIME MULTI OBJECTIVE EVOLUTIONARY ALGORITHMS MOEAS ARE RECEIVING INCREASING AND UNPRECEDENTED ATTENTION RESEARCHERS AND PRACTITIONERS ARE FINDING AN IRRESISTIBLE MATCH BE TWEEN THE POPULATION AVAILABLE IN MOST GENETIC AND EVOLUTIONARY ALGORITHMS AND THE NEED IN MULTI OBJECTIVE PROBLEMS TO APPROXIMATE THE PARETO TRADE OFF CURVE OR SURFACE

Artificial Intelligence and Industrial Applications 2020-09-17 THIS BOOK CONSTITUTES THE PROCEEDINGS OF THE 9TH INTERNATIONAL CONFERENCE ON BIG DATA BIGDATA 2020 HELD AS PART OF SCF 2020 DURING SEPTEMBER 18 20 2020 THE CONFERENCE WAS PLANNED TO TAKE PLACE IN HONOLULU HI USA AND WAS CHANGED TO A VIRTUAL FORMAT DUE TO THE COVID 19 PANDEMIC THE 16 FULL AND 3 SHORT PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 52 SUBMISSIONS THE TOPICS COVERED ARE BIG DATA ARCHITECTURE BIG DATA MODELING BIG DATA AS A SERVICE BIG DATA FOR VERTICAL INDUSTRIES GOVERNMENT HEALTHCARE ETC BIG DATA ANALYTICS BIG DATA TOOLKITS BIG DATA OPEN PLATFORMS ECONOMIC ANALYSIS BIG DATA FOR ENTERPRISE TRANSFORMATION BIG DATA IN BUSINESS PERFORMANCE MANAGEMENT BIG DATA FOR BUSINESS MODEL INNOVATIONS AND ANALYTICS BIG DATA IN ENTERPRISE MANAGEMENT MODELS AND PRACTICES BIG DATA IN GOVERNMENT MANAGEMENT MODELS AND PRACTICES AND BIG DATA IN SMART PLANET SOLUTIONS

Evolutionary Algorithms for Solving Multi-Objective Problems 2012-01-14 MECHANICAL DESIGN INCLUDES AN OPTIMIZATION PROCESS IN WHICH DESIGNERS ALWAYS CONSIDER OBJECTIVES SUCH AS STRENGTH DEFLECTION WEIGHT WEAR CORROSION ETC DEPENDING ON THE REQUIREMENTS HOWEVER DESIGN OPTIMIZATION FOR A COMPLETE MECHANICAL ASSEMBLY LEADS TO A COMPLICATED OBJECTIVE FUNCTION WITH A LARGE NUMBER OF DESIGN VARIABLES IT IS A GOOD PRACTICE TO APPLY OPTIMIZATION TECHNIQUES FOR INDIVIDUAL COMPONENTS OR INTERMEDIATE ASSEMBLIES THAN A COMPLETE ASSEMBLY ANALYTICAL OR NUMERICAL METHODS FOR CALCULATING THE EXTREME VALUES OF A FUNCTION MAY PERFORM WELL IN MANY PRACTICAL CASES BUT MAY FAIL IN MORE COMPLEX DESIGN SITUATIONS IN REAL DESIGN PROBLEMS THE NUMBER OF DESIGN PARAMETERS CAN BE VERY LARGE AND THEIR INFLUENCE ON THE VALUE TO BE OPTIMIZED THE GOAL FUNCTION CAN BE VERY COMPLICATED HAVING NONLINEAR CHARACTER IN THESE COMPLEX CASES ADVANCED OPTIMIZATION ALGORITHMS OFFER SOLUTIONS TO THE PROBLEMS BECAUSE THEY FIND A SOLUTION NEAR TO THE GLOBAL OPTIMUM WITHIN REASONABLE TIME AND COMPUTATIONAL COSTS MECHANICAL DESIGN OPTIMIZATION USING ADVANCED OPTIMIZATION TECHNIQUES PRESENTS A COMPREHENSIVE REVIEW ON LATEST RESEARCH AND DEVELOPMENT TRENDS FOR DESIGN OPTIMIZATION OF MECHANICAL ELEMENTS AND DEVICES USING EXAMPLES OF VARIOUS MECHANICAL ELEMENTS AND DEVICES THE POSSIBILITIES FOR DESIGN OPTIMIZATION WITH ADVANCED OPTIMIZATION TECHNIQUES ARE DEMONSTRATED BASIC AND ADVANCED CONCEPTS OF TRADITIONAL AND ADVANCED OPTIMIZATION TECHNIQUES ARE PRESENTED ALONG WITH REAL CASE STUDIES RESULTS OF APPLICATIONS OF THE PROPOSED TECHNIQUES AND THE BEST OPTIMIZATION STRATEGIES TO ACHIEVE BEST PERFORMANCE ARE HIGHLIGHTED FURTHERMORE A NOVEL ADVANCED OPTIMIZATION METHOD NAMED TEACHING LEARNING BASED OPTIMIZATION TLBO IS PRESENTED IN THIS BOOK AND THIS METHOD SHOWS BETTER PERFORMANCE WITH LESS COMPUTATIONAL EFFORT FOR THE LARGE SCALE PROBLEMS MECHANICAL DESIGN OPTIMIZATION USING ADVANCED OPTIMIZATION TECHNIQUES IS INTENDED FOR DESIGNERS PRACTITIONERS MANAGERS INSTITUTES INVOLVED IN DESIGN RELATED PROJECTS APPLIED RESEARCH WORKERS ACADEMICS AND GRADUATE STUDENTS IN MECHANICAL AND INDUSTRIAL ENGINEERING AND WILL BE USEFUL TO THE INDUSTRIAL PRODUCT DESIGNERS FOR REALIZING A PRODUCT AS IT PRESENTS NEW MODELS AND OPTIMIZATION TECHNIQUES TO MAKE TASKS EASIER LOGICAL EFFICIENT AND EFFECTIVE

Big Data – BigData 2020 1996 THE INTERNATIONAL CONFERENCE ON INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT IS SPONSORED BY THE CHINESE INDUSTRIAL ENGINEERING INSTITUTION CMES WHICH IS THE ONLY NATIONAL LEVEL ACADEMIC SOCIETY FOR INDUSTRIAL ENGINEERING THE CONFERENCE IS HELD ANNUALLY AS THE MAJOR EVENT IN THIS ARENA BEING THE LARGEST AND THE MOST AUTHORITATIVE INTERNATIONAL ACADEMIC CONFERENCE HELD IN CHINA IT PROVIDES AN ACADEMIC PLATFORM FOR EXPERTS AND ENTREPRENEURS IN THE AREAS OF INTERNATIONAL INDUSTRIAL ENGINEERING AND MANAGEMENT TO EXCHANGE THEIR RESEARCH FINDINGS MANY EXPERTS IN VARIOUS FIELDS FROM CHINA AND AROUND THE WORLD GATHER TOGETHER AT THE CONFERENCE TO REVIEW EXCHANGE SUMMARIZE AND PROMOTE THEIR ACHIEVEMENTS IN THE FIELDS OF INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT FOR EXAMPLE SOME EXPERTS PAY SPECIAL ATTENTION TO THE CURRENT STATE OF THE APPLICATION OF RELATED TECHNIQUES IN CHINA AS WELL AS THEIR FUTURE PROSPECTS SUCH AS GREEN PRODUCT DESIGN QUALITY CONTROL AND MANAGEMENT SUPPLY CHAIN AND LOGISTICS MANAGEMENT TO ADDRESS THE NEED FOR AMONGST OTHER THINGS LOW CARBON ENERGY SAVING AND EMISSION REDUCTION THEY ALSO OFFER OPINIONS ON THE OUTLOOK FOR THE DEVELOPMENT OF RELATED TECHNIQUES THE PROCEEDINGS OFFERS IMPRESSIVE METHODS AND CONCRETE APPLICATIONS FOR EXPERTS FROM COLLEGES AND UNIVERSITIES

RESEARCH INSTITUTIONS AND ENTERPRISES WHO ARE ENGAGED IN THEORETICAL RESEARCH INTO INDUSTRIAL ENGINEERING AND ENGINEERING MANAGEMENT AND ITS APPLICATIONS AS ALL THE PAPERS ARE OF GREAT VALUE FROM BOTH AN ACADEMIC AND A PRACTICAL POINT OF VIEW THEY ALSO PROVIDE RESEARCH DATA FOR INTERNATIONAL SCHOLARS WHO ARE INVESTIGATING CHINESE STYLE ENTERPRISES AND ENGINEERING MANAGEMENT

Mechanical Design Optimization Using Advanced Optimization Techniques 2013-12-16 INDUSTRIAL ENGINEERING AFFECTS ALL LEVELS OF SOCIETY WITH INNOVATIONS IN MANUFACTURING AND OTHER FORMS OF ENGINEERING OFTENTIMES SPAWNING CULTURAL OR EDUCATIONAL SHIFTS ALONG WITH NEW TECHNOLOGIES INDUSTRIAL ENGINEERING CONCEPTS METHODOLOGIES TOOLS AND APPLICATIONS SERVES AS A VITAL COMPENDIUM OF RESEARCH DETAILING THE LATEST RESEARCH THEORIES AND CASE STUDIES ON INDUSTRIAL ENGINEERING BRINGING TOGETHER CONTRIBUTIONS FROM AUTHORS AROUND THE WORLD THIS THREE VOLUME COLLECTION REPRESENTS THE MOST SOPHISTICATED RESEARCH AND DEVELOPMENTS FROM THE FIELD OF INDUSTRIAL ENGINEERING AND WILL PROVE A VALUABLE RESOURCE FOR RESEARCHERS ACADEMICS AND PRACTITIONERS ALIKE

□ □ □ □ □ □2□ 1□-□8-□ 1□THIS BOOK FOCUSES ON THE IMPLEMENTATION EVALUATION AND APPLICATION OF DNA RNA BASED GENETIC ALGORITHMS IN CONNECTION WITH NEURAL NETWORK MODELING FUZZY CONTROL THE Q LEARNING ALGORITHM AND CNN DEEP LEARNING CLASSIFIER IT PRESENTS SEVERAL DNA RNA BASED GENETIC ALGORITHMS AND THEIR MODIFICATIONS WHICH ARE TESTED USING BENCHMARKS AS WELL AS DETAILED INFORMATION ON THE IMPLEMENTATION STEPS AND PROGRAM CODE IN ADDITION TO SINGLE OBJECTIVE OPTIMIZATION HERE GENETIC ALGORITHMS ARE ALSO USED TO SOLVE MULTI OBJECTIVE OPTIMIZATION FOR NEURAL NETWORK MODELING FUZZY CONTROL MODEL PREDICTIVE CONTROL AND PID CONTROL IN CLOSING NEW TOPICS SUCH AS Q LEARNING AND CNN ARE INTRODUCED THE BOOK OFFERS A VALUABLE REFERENCE GUIDE FOR RESEARCHERS AND DESIGNERS IN SYSTEM MODELING AND CONTROL AND FOR SENIOR UNDERGRADUATE AND GRADUATE STUDENTS AT COLLEGES AND UNIVERSITIES

Proceedings of 20th International Conference on Industrial Engineering and Engineering Management 2020-07-01 THIS BOOK OFFERS A TIMELY REVIEW OF CUTTING EDGE APPLICATIONS OF COMPUTATIONAL INTELLIGENCE TO BUSINESS MANAGEMENT AND FINANCIAL ANALYSIS IT COVERS A WIDE RANGE OF INTELLIGENT AND OPTIMIZATION TECHNIQUES REPORTING IN DETAIL ON THEIR APPLICATION TO REAL WORLD PROBLEMS RELATING TO PORTFOLIO MANAGEMENT AND DEMAND FORECASTING DECISION MAKING KNOWLEDGE ACQUISITION AND SUPPLY CHAIN SCHEDULING AND MANAGEMENT

Industrial Engineering: Concepts, Methodologies, Tools, and Applications 2021-05-29 THIS BOOK IS FOR THOSE WHO USE DATA ANALYSIS TO BUILD DECISION SUPPORT SYSTEMS PARTICULARLY ENGINEERS SCIENTISTS AND STATISTICIANS PROVIDED BY PUBLISHER

DNA Computing Based Genetic Algorithm 2009-04-30 THIS VOLUME PROVIDES UPDATED IN DEPTH MATERIAL ON THE APPLICATION OF INTELLIGENT OPTIMIZATION IN BIOLOGY AND MEDICINE THE AIM OF THE BOOK IS TO PRESENT SOLUTIONS TO THE CHALLENGES AND PROBLEMS FACING BIOLOGY AND MEDICINE APPLICATIONS THIS VOLUME COMPRISES OF 13 CHAPTERS INCLUDING AN OVERVIEW CHAPTER PROVIDING AN UP TO DATE AND STATE OF THE RESEARCH ON THE APPLICATION OF INTELLIGENT OPTIMIZATION FOR BIOINFORMATICS APPLICATIONS DNA BASED STEGANOGRAPHY A MODIFIED PARTICLE SWARM OPTIMIZATION ALGORITHM FOR SOLVING CAPACITATED MAXIMAL COVERING LOCATION PROBLEM IN HEALTHCARE SYSTEMS OPTIMIZATION METHODS FOR MEDICAL IMAGE SUPER RESOLUTION RECONSTRUCTION AND BREAST CANCER CLASSIFICATION MOREOVER SOME CHAPTERS THAT DESCRIBE SEVERAL BIO INSPIRED APPROACHES IN MEDLINE TEXT MINING DNA BINDING PROTEINS AND CLASSES OPTIMIZED TUMOR BREAST CANCER CLASSIFICATION USING COMBINING RANDOM SUBSPACE AND STATIC CLASSIFIERS SELECTION PARADIGMS AND DENTAL IMAGE REGISTRATION THE BOOK WILL BE A USEFUL COMPENDIUM FOR A BROAD RANGE OF READERS FROM STUDENTS OF UNDERGRADUATE TO POSTGRADUATE LEVELS AND ALSO FOR RESEARCHERS PROFESSIONALS ETC WHO WISH TO ENRICH THEIR KNOWLEDGE ON INTELLIGENT OPTIMIZATION IN BIOLOGY AND MEDICINE AND APPLICATIONS WITH ONE SINGLE BOOK

Computational Management 2015-07-18 THIS BOOK AND ITS SISTER VOLUMES I E LNCS VOLS 3610 3611 AND 3612 ARE THE PROCEEDINGS OF THE 1ST INTERNATIONAL CONFERENCE ON NATURAL COMPUTATION ICNC 2005 JOINTLY HELD WITH THE 2ND INTERNATIONAL CONFERENCE ON FUZZY SYSTEMS AND KNOWLEDGE DISCOVERY FSKD 2005 LNAI VOLS 3613 AND 3614 FROM 27 TO 29 AUGUST 2005 IN CHANGSHA HUNAN CHINA

Computational Intelligence for Missing Data Imputation, Estimation, and Management: Knowledge Optimization Techniques 2005-08-25 THIS IS AN OPEN ACCESS BOOK AS A LEADING ROLE IN THE GLOBAL MEGATREND OF SCIENTIFIC INNOVATION CHINA HAS BEEN CREATING A MORE AND MORE OPEN ENVIRONMENT FOR SCIENTIFIC INNOVATION INCREASING THE DEPTH AND BREADTH OF ACADEMIC COOPERATION AND BUILDING A COMMUNITY OF INNOVATION THAT BENEFITS ALL THESE ENDEAVORS HAVE MADE

NEW CONTRIBUTION TO GLOBALIZATION AND CREATING A COMMUNITY OF SHARED FUTURE TO ADAPT TO THIS CHANGING WORLD AND CHINA S FAST DEVELOPMENT IN THIS NEW AREA THE 2ND INTERNATIONAL CONFERENCE ON INTERNET EDUCATION AND INFORMATION TECHNOLOGY IEIT 2022 IS TO BE HELD IN APRIL 15 17 2022 THIS CONFERENCE TAKES BRINGING TOGETHER GLOBAL WISDOM IN SCIENTIFIC INNOVATION TO PROMOTE HIGH QUALITY DEVELOPMENT AS THE THEME AND FOCUSES ON RESEARCH FIELDS INCLUDING INFORMATION TECHNOLOGY EDUCATION BIG DATA AND INTERNET THIS CONFERENCE AIMS TO EXPAND CHANNELS OF INTERNATIONAL ACADEMIC EXCHANGE IN SCIENCE AND TECHNOLOGY BUILD A SHARING PLATFORM OF ACADEMIC RESOURCES PROMOTE SCIENTIFIC INNOVATION ON THE GLOBAL SCALE IMPROVE ACADEMIC COOPERATION BETWEEN CHINA AND THE OUTSIDE WORLD IT ALSO AIMS TO ENCOURAGE EXCHANGE OF INFORMATION ON RESEARCH FRONTIERS IN DIFFERENT FIELDS CONNECT THE MOST ADVANCED ACADEMIC RESOURCES IN CHINA AND ABROAD TURN RESEARCH RESULTS INTO INDUSTRIAL SOLUTIONS BRING TOGETHER TALENTS TECHNOLOGIES AND CAPITAL TO BOOST DEVELOPMENT

Applications of Intelligent Optimization in Biology and Medicine 2023-01-14 THIS VOLUME COMPRISES THE SELECT PEER REVIEWED PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ADVANCES AND APPLICATIONS OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING 2022 ICAAAIML 2022 IT AIMS TO PROVIDE A COMPREHENSIVE AND BROAD SPECTRUM PICTURE OF STATE OF THE ART RESEARCH AND DEVELOPMENT IN THE AREAS OF ARTIFICIAL INTELLIGENCE MACHINE LEARNING DEEP LEARNING AND THEIR ADVANCED APPLICATIONS IN COMPUTER VISION AND BLOCKCHAIN IT ALSO COVERS RESEARCH IN CORE CONCEPTS OF COMPUTERS INTELLIGENT SYSTEM DESIGN AND DEPLOYMENT REAL TIME SYSTEMS WSN SENSORS AND SENSOR NODES SOFTWARE ENGINEERING IMAGE PROCESSING AND CLOUD COMPUTING THIS VOLUME WILL PROVIDE A VALUABLE RESOURCE FOR THOSE IN ACADEMIA AND INDUSTRY

Advances in Natural Computation 2023-12-21

Proceedings of the 2nd International Conference on Internet, Education and Information Technology (IEIT 2022)

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