Teaching Learning Optimization Algorithm Code

Teaching Learning Based Optimization Algorithm
Engineering and Applied Sciences Optimization
Metaheuristics: Outlines, MATLAB Codes and Examples
Computational Intelligence-based Optimization Algorithms
Intelligent Computing and Optimization
Advanced Optimization by Nature-Inspired Algorithms
Socio-cultural Inspired Metaheuristics
Metaheuristic and Evolutionary Computation: Algorithms and Applications
Nature-Inspired Methods for Metaheuristics Optimization
Handbook of Research on Modern Optimization Algorithms and Applications in Engineering and Economics
Proceedings of the International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA) 2013
Application of Advanced Optimization Techniques for Healthcare Analytics
Comprehensive Metaheuristics
Data Driven Methods for Civil Structural Health Monitoring and Resilience
Solving Transport Problems
Handbook of Research on Emergent Applications of Optimization Algorithms
Metaheuristic Approaches for Optimum Design of Reinforced Concrete Structures: Emerging Research and Opportunities
Computer Vision and Robotics
Artificial Intelligence in Bioinformatics and Drug Repurposing: Methods and Applications
Knowledge Science, Engineering and Management
Neural Computing for Advanced Applications
Advances in Metaheuristic Algorithms for Optimal Design of Structures
Real-life Applications with Membrane Computing
Advances in Metaheuristic Algorithms for Optimal Design of Structures
Innovative Teaching Strategies and New Learning Paradigms in Computer Programming
Colliding Bodies Optimization
Advances in Hard-to-Cut Materials
Trends in Data Engineering Methods for Intelligent Systems
Thermal System Optimization
Handbook of Research on Predictive Modeling and Optimization Methods in Science and Engineering
Engineering Optimization 2014
Sustainable Manufacturing and Remanufacturing Management
Web Information Systems Engineering – WISE 2018
Multi-disciplinary Trends in Artificial Intelligence
Recent Advances in Technology Research and Education
Future Urban Energy System for Buildings
Progress in Systems Engineering
Proceedings of 7th International Conference on Harmony Search, Soft Computing and Applications
Smart Innovations in Communication and Computational Sciences
Applied Mathematics and Parallel Computing

Thank you very much for downloading **Teaching Learning Optimization Algorithm Code**. Maybe you have knowledge that, people have look hundreds times for their chosen novels like this Teaching Learning Optimization Algorithm Code, but end up in harmful downloads.
Rather than enjoying a good book with a cup of tea in the afternoon, instead they juggled with some harmful virus inside their computer.

Teaching Learning Optimization Algorithm Code is available in our book collection an online access to it is set as public so you can get it instantly.
Our digital library hosts in multiple locations, allowing you to get the most less latency time to download any of our books like this one.
Merely said, the Teaching Learning Optimization Algorithm Code is universally compatible with any devices to read

2015-11-14 R. Venkata Rao Describing a new optimization algorithm, the "Teaching-Learning-Based Optimization (TLBO)," in a clear and lucid style, this book maximizes reader insights into how the TLBO algorithm can be used to solve continuous and discrete optimization problems involving single or multiple objectives. As the algorithm operates on the principle of teaching and learning, where teachers influence the quality of learners' results, the elitist version of TLBO algorithm (ETLBO) is described along with applications of the TLBO algorithm in the fields of electrical engineering, mechanical design, thermal engineering, manufacturing engineering, civil engineering, structural engineering, computer engineering, electronics engineering, physics and biotechnology. The book offers a valuable resource for scientists, engineers and practitioners involved in the development and usage of advanced optimization algorithms.
2015-05-22 Nikos D. Lagaros The chapters which appear in this volume are selected studies presented at the First International Conference on Engineering and Applied Sciences Optimization (OPT-i), Kos, Greece, 4-6 June 2014 and works written by friends, former colleagues and students of the late Professor M. G. Karlaftis; all in the area of optimization that he loved and published so much in himself. The subject areas represented here range from structural optimization, logistics, transportation, traffic and telecommunication networks to operational research, metaheuristics, multidisciplinary and multiphysics design optimization, etc. This volume is dedicated to the life and the memory of Professor Matthew G. Karlaftis, who passed away a few hours before he was to give the opening speech at OPT-i. All contributions reflect the warmth and genuine friendship which he enjoyed from his associates and show how much his scientific contribution has been appreciated. He will be greatly missed and it is hoped that this volume will be received as a suitable memorial to his life and achievements.
2019-03-29 Ali Kaveh The book presents eight well-known and often used algorithms besides nine newly developed algorithms by the first author and his students in a practical implementation framework. Matlab codes and some benchmark structural optimization problems are provided. The aim is to provide an efficient context for experienced researchers or readers not familiar with theory, applications and computational developments of the considered metaheuristics. The information will also be of interest to readers interested in application of metaheuristics for hard optimization, comparing conceptually different metaheuristics and designing new metaheuristics.
2023-10-11 Babak Zolghadr-Asli Computational intelligence-based optimization methods, also known as metaheuristic optimization algorithms, are a popular topic in mathematical programming. These methods have bridged the gap between various approaches and created a new school of thought to solve real-world optimization problems. In this book, we have selected some of the most effective and renowned algorithms in the literature. These algorithms are not only practical but also provide thought-provoking theoretical ideas to

help readers understand how they solve optimization problems. Each chapter includes a brief review of the algorithm's background and the fields it has been used in. Additionally, Python code is provided for all algorithms at the end of each chapter, making this book a valuable resource for beginner and intermediate programmers looking to understand these algorithms.

2021-02-07 Pandian Vasant Third edition of International Conference on Intelligent Computing and Optimization and as a premium fruit, this book, pursue to gather research leaders, experts and scientists on Intelligent Computing and Optimization to share knowledge, experience and current research achievements. Conference and book provide a unique opportunity for the global community to interact and share novel research results, explorations and innovations among colleagues and friends. This book is published by SPRINGER, Advances in Intelligent Systems and Computing. Ca. 100 authors submitted full papers to ICO'2020. That global representation demonstrates the growing interest of the research community here. The book covers innovative and creative research on sustainability, smart cities, meta-heuristics optimization, cyber-security, block chain, big data analytics, IoTs, renewable energy, artificial intelligence, Industry 4.0, modeling and simulation. We editors thank all authors and reviewers for their important service. Best high-quality papers have been selected by the International PC for our premium series with SPRINGER.

2017-06-30 Omid Bozorg-Haddad This book, compiles, presents, and explains the most important meta-heuristic and evolutionary optimization algorithms whose successful performance has been proven in different fields of engineering, and it includes application of these algorithms to important engineering optimization problems. In addition, this book guides readers to studies that have implemented these algorithms by providing a literature review on developments and applications of each algorithm. This book is intended for students, but can be used by researchers and professionals in the area of engineering optimization.

2019-03-29 Anand J. Kulkarni This book presents the latest insights and developments in the field of socio-cultural inspired algorithms. Akin to evolutionary and swarm-based optimization algorithms, socio-cultural algorithms belong to the category of metaheuristics (problem-independent computational methods) and are inspired by natural and social tendencies observed in humans by which they learn from one another through social interactions. This book is an interesting read for engineers, scientists, and students studying/working in the optimization, evolutionary computation, artificial intelligence (AI) and computational intelligence fields.

2020-10-08 Hasmat Malik This book addresses the principles and applications of metaheuristic approaches in engineering and related fields. The first part covers metaheuristics tools and techniques such as ant colony optimization and Tabu search, and their applications to several classes of optimization problems. In turn, the book's second part focuses on a wide variety of metaheuristics applications in engineering and/or the applied sciences, e.g. in smart grids and renewable energy. In addition, the simulation codes for the problems discussed are included in an appendix for ready reference. Intended for researchers aspiring to learn and apply metaheuristic techniques, and gathering contributions by prominent experts in the field, the book offers readers an essential introduction to metaheuristics, its theoretical aspects and applications.

2020-01-17 Fouad Bennis This book gathers together a set of chapters covering recent development in optimization methods that are inspired by nature. The first group of chapters describes in detail different meta-heuristic algorithms, and shows their applicability using some test or real-world problems. The second part of the book is especially focused on advanced applications and case studies. They span different engineering fields, including mechanical, electrical and civil engineering, and earth/environmental science, and covers topics such as robotics, water management, process optimization, among others. The book covers both basic concepts and advanced issues, offering a timely introduction to nature-inspired optimization method for newcomers and

students, and a source of inspiration as well as important practical insights to engineers and researchers.
2016-03-08 Vasant, Pandian Modern optimization approaches have attracted many research scientists, decision makers and practicing researchers in recent years as powerful intelligent computational techniques for solving several complex real-world problems. The Handbook of Research on Modern Optimization Algorithms and Applications in Engineering and Economics highlights the latest research innovations and applications of algorithms designed for optimization applications within the fields of engineering, IT, and economics. Focusing on a variety of methods and systems as well as practical examples, this book is a significant resource for graduate-level students, decision makers, and researchers in both public and private sectors who are seeking research-based methods for modeling uncertain real-world problems. .
2013-10-05 Suresh Chandra Satapathy This volume contains the papers presented at the Second International Conference on Frontiers in Intelligent Computing: Theory and Applications (FICTA-2013) held during 14-16 November 2013 organized by Bhubaneswar Engineering College (BEC), Bhubaneswar, Odisha, India. It contains 63 papers focusing on application of intelligent techniques which includes evolutionary computation techniques like genetic algorithm, particle swarm optimization techniques, teaching-learning based optimization etc for various engineering applications such as data mining, Fuzzy systems, Machine Intelligence and ANN, Web technologies and Multimedia applications and Intelligent computing and Networking etc.
2023-04-11 Mohamed Abdel-Basset Application of Advanced Optimization Techniques for Healthcare Analytics, 1st Edition, is an excellent compilation of current and advanced optimization techniques which can readily be applied to solve different hospital management problems. The healthcare system is currently a topic of significant investigation to make life easier for those who are disabled, old, or sick, as well as for young children. The emphasis of the healthcare system has evolved throughout time due to several emerging beneficial technologies, such as personal digital assistants (PDAs), data mining, the internet of things, metaheuristics, fog computing, and cloud computing. Metaheuristics are strong technology for tackling several optimization problems in various fields, especially healthcare systems. The primary advantage of metaheuristic algorithms is their ability to find a better solution to a healthcare problem and their ability to consume as little time as possible. In addition, metaheuristics are more flexible compared to several other optimization techniques. These algorithms are not related to a specific optimization problem but could be applied to any optimization problem by making some small adaptations to become suitable to tackle it. The successful outcome of this book will enable a decision-maker or practitioner to pick a suitable optimization approach when making decisions to schedule patients under crowding environments with minimized human errors.
2023-01-31 Seyedali Mirjalili Comprehensive Metaheuristics: Algorithms and Applications presents the foundational underpinnings of metaheuristics and a broad scope of algorithms and real-world applications across a variety of research fields. The book starts with fundamentals, mathematical prerequisites, and conceptual approaches to provide readers with a solid foundation. After presenting multi-objective optimization, constrained optimization, and problem formation for metaheuristics, world-renowned authors give readers in-depth understanding of the full spectrum of algorithms and techniques. Scientists, researchers, academicians, and practitioners who are interested in optimizing a process or procedure to achieve a goal will benefit from the case studies of real-world applications from different domains. The book takes a much-needed holistic approach, putting the most widely used metaheuristic algorithms together with an in-depth treatise on multi-disciplinary applications of metaheuristics. Each algorithm is thoroughly analyzed to observe its behavior, providing a detailed tutorial on how to solve problems using metaheuristics. New case studies and research problem statements are also discussed, which will help researchers in their application of the concepts. Presented by world-renowned researchers and practitioners in metaheuristics

Includes techniques, algorithms, and applications based on real-world case studies Presents the methodology for formulating optimization problems for metaheuristics Provides readers with methods for analyzing and tuning the performance of a metaheuristic, as well as for integrating metaheuristics in other AI techniques Features online complementary source code from the applications and algorithms

2023-10-26 Mohammad Noori Data Driven Methods for Civil Structural Health Monitoring and Resilience: Latest Developments and Applications provides a comprehensive overview of data-driven methods for structural health monitoring (SHM) and resilience of civil engineering structures, mostly based on artificial intelligence or other advanced data science techniques. This allows existing structures to be turned into smart structures, thereby allowing them to provide intelligible information about their state of health and performance on a continuous, relatively real-time basis. Artificial-intelligence-based methodologies are becoming increasingly more attractive for civil engineering and SHM applications; machine learning and deep learning methods can be applied and further developed to transform the available data into valuable information for engineers and decision makers.

2020-02-26 Walid Besbes Solving Transport Problems establishes fundamental points and good practice in resolving matters regarding green transportation. This is to prompt further research in conveyance issues by providing readers with new knowledge and grounds for integrated models and solution methods. Focusing on green transportation, this book covers various sub-topics and thus consists of diverse content. Traditionally, academia and transport practitioners have mainly concentrated on efficient fleet management to achieve economic benefits and better-quality service. More recently, due to growing public environmental concerns and the industry understanding of the issue, the academic community has started to address environmental issues. The studies of green transportation compiled in this book have identified certain areas of interest, such as references, viewpoints, algorithms and ideas. Solving Transport Problems is for researchers, environmental decision-makers and other concerned parties, to start discussion on developing optimized technology and alternative fuel-based integrated models for environmentally cleaner transport systems.

2017-10-31 Vasant, Pandian Modern optimization approaches have attracted an increasing number of scientists, decision makers, and researchers. As new issues in this field emerge, different optimization methodologies must be developed and implemented. The Handbook of Research on Emergent Applications of Optimization Algorithms is an authoritative reference source for the latest scholarly research on modern optimization techniques for solving complex problems of global optimization and their applications in economics and engineering. Featuring coverage on a broad range of topics and perspectives such as hybrid systems, non-cooperative games, and cryptography, this publication is ideally designed for students, researchers, and engineers interested in emerging developments in optimization algorithms.

2020-03-20 Kayabekir, Aylin Ece Reinforced concrete structures are one of the major structural types and must adhere to design regulation codes. It is ideal to find the best design (section dimension, material type, and amount of reinforcement) with the minimum cost providing the design constraints (design formulation considering loading of structure). Metaheuristic methods inspired by natural phenomena can consider design constraints by combining the analyses of formulation of reinforced concrete structures with an iterative numerical algorithm using several convergence options of random generation of candidate design solutions. Metaheuristic Approaches for Optimum Design of Reinforced Concrete Structures: Emerging Research and Opportunities is a pivotal reference source that focuses on several metaheuristic algorithms and the design of several types of structural members. Additionally, retrofit applications and seismic design issues are considered for readers in earthquake zones. Highlighting a wide range of topics including algorithms, design variables,

and retrofit design, this book is ideally designed for architects, engineers, urban designers, government officials, policymakers, researchers, academicians, and students.
2022-03-14 Jagdish Chand Bansal This book consists of a collection of the high-quality research articles in the field of computer vision and robotics which are presented in the International Conference on Computer Vision and Robotics (CVR 2021), organized by BBD University Lucknow, India, during 7–8 August 2021. The book discusses applications of computer vision and robotics in the fields like medical science, defence, and smart city planning. The book presents recent works from researchers, academicians, industry, and policy makers.
2022-04-08 Pan Zheng
Zhi Jin
2021-08-20 Haijun Zhang This book presents refereed proceedings of the Second International Conference Neural Computing for Advanced Applications, NCAA 2021, held in Guangzhou, China, in August, 2021. The 54 full papers papers were thorougly reviewed and selected from a total of 144 qualified submissions. The papers are organized in topical sections on neural network theory, cognitive sciences, neuro-system hardware implementations, and NN-based engineering applications; machine learning, data mining, data security and privacy protection, and data-driven applications; neural computing-based fault diagnosis, fault forecasting, prognostic management, and system modeling; computational intelligence, nature-inspired optimizers, and their engineering applications; fuzzy logic, neuro-fuzzy systems, decision making, and their applications in management sciences; control systems, network synchronization, system integration, and industrial artificial intelligence; computer vision, image processing, and their industrial applications; cloud/edge/fog computing, the Internet of Things/Vehicles(IoT/IoV), and their system optimization; spreading dynamics, forecasting, and other intelligent techniques against coronavirus disease (COVID-19).
2016-11-09 A. Kaveh This book presents efficient metaheuristic algorithms for optimal design of structures. Many of these algorithms are developed by the author and his colleagues, consisting of Democratic Particle Swarm Optimization, Charged System Search, Magnetic Charged System Search, Field of Forces Optimization, Dolphin Echolocation Optimization, Colliding Bodies Optimization, Ray Optimization. These are presented together with algorithms which were developed by other authors and have been successfully applied to various optimization problems. These consist of Particle Swarm Optimization, Big Bang-Big Crunch Algorithm, Cuckoo Search Optimization, Imperialist Competitive Algorithm, and Chaos Embedded Metaheuristic Algorithms. Finally a multi-objective optimization method is presented to solve large-scale structural problems based on the Charged System Search algorithm. The concepts and algorithms presented in this book are not only applicable to optimization of skeletal structures and finite element models, but can equally be utilized for optimal design of other systems such as hydraulic and electrical networks. In the second edition seven new chapters are added consisting of the new developments in the field of optimization. These chapters consist of the Enhanced Colliding Bodies Optimization, Global Sensitivity Analysis, Tug of War Optimization, Water Evaporation Optimization, Vibrating Particle System Optimization and Cyclical Parthenogenesis Optimization algorithms. A chapter is also devoted to optimal design of large scale structures.
2017-04-05 Gexiang Zhang This book thoroughly investigates the underlying theoretical basis of membrane computing models, and reveals their latest applications. In addition, to date there have been no illustrative case studies or complex real-life applications that capitalize on the full potential of the sophisticated membrane systems computational apparatus; gaps that this book remedies. By studying various complex applications – including engineering optimization, power systems fault diagnosis, mobile robot controller design, and complex biological systems involving data modeling and process interactions – the book also extends the capabilities of membrane systems models with features such as formal verification techniques, evolutionary approaches, and fuzzy reasoning methods. As such, the book offers a

comprehensive and up-to-date guide for all researchers, PhDs and undergraduate students in the fields of computer science, engineering and the bio-sciences who are interested in the applications of natural computing models.
2021-01-21 Ali Kaveh This book presents efficient metaheuristic algorithms for optimal design of structures. Many of these algorithms are developed by the author and his graduate students, consisting of Particle Swarm Optimization, Charged System Search, Magnetic Charged System Search, Field of Forces Optimization, Democratic Particle Swarm Optimization, Dolphin Echolocation Optimization, Colliding Bodies Optimization, Ray Optimization. These are presented together with algorithms which are developed by other authors and have been successfully applied to various optimization problems. These consist of Partical Swarm Optimization, Big Band Big Crunch algorithm, Cuckoo Search Optimization, Imperialist Competitive Algorithm and Chaos Embedded Metaheuristic Algorithm. Finally a multi-objective Optimization is presented to Solve large scale structural problems based on the Charged System Search algorithm, In the second edition seven new chapters are added consisting of Enhance colliding bodies optimization, Global sensitivity analysis, Tug of War Optimization, Water evaporation optimization, Vibrating System Optimization and Cyclical Parthenogenesis Optimization algorithm. In the third edition, five new chapters are included consisting of the recently developed algorithms. These are Shuffled Shepherd Optimization Algorithm, Set Theoretical Shuffled Shepherd Optimization Algorithm, Set Theoretical Teaching-Learning-Based Optimization Algorithm, Thermal Exchange Metaheuristic Optimization Algorithm, and Water Strider Optimization Algorithm and Its Enhancement. The concepts and algorithm presented in this book are not only applicable to optimization of skeletal structure, finite element models, but can equally be utilized for optimal design of other systems such as hydraulic and electrical networks.
2014-11-30 Ricardo Queirós Courses in computer programming combine a number of different concepts, from general problem-solving to mathematical precepts such as algorithms and computational intelligence. Due to the complex nature of computer science education, teaching the novice programmer can be a challenge. Innovative Teaching Strategies and New Learning Paradigms in Computer Programming brings together pedagogical and technological methods to address the recent challenges that have developed in computer programming courses. Focusing on educational tools, computer science concepts, and educational design, this book is an essential reference source for teachers, practitioners, and scholars interested in improving the success rate of students.
2015-06-10 A. Kaveh This book presents and applies a novel efficient meta-heuristic optimization algorithm called Colliding Bodies Optimization (CBO) for various optimization problems. The first part of the book introduces the concepts and methods involved, while the second is devoted to the applications. Though optimal design of structures is the main topic, two chapters on optimal analysis and applications in constructional management are also included. This algorithm is based on one-dimensional collisions between bodies, with each agent solution being considered as an object or body with mass. After a collision of two moving bodies with specified masses and velocities, these bodies again separate, with new velocities. This collision causes the agents to move toward better positions in the search space. The main algorithm (CBO) is internally parameter independent, setting it apart from previously developed meta-heuristics. This algorithm is enhanced (ECBO) for more efficient applications in the optimal design of structures. The algorithms are implemented in standard computer programming languages (MATLAB and C++) and two main codes are provided for ease of use.
2020-03-13 Grzegorz M. Królczyk The rapid growth of modern industry has resulted in a growing demand for construction materials with excellent operational properties. However, the improved features of these materials can significantly hinder their manufacture and, therefore, they can be defined as hard-to-cut. The main difficulties during the manufacturing/processing of hard-to-cut materials are attributed especially to their high

hardness and abrasion resistance, high strength at room or elevated temperatures, increased thermal conductivity, as well as resistance to oxidation and corrosion. Nowadays, the group of hard-to-cut materials is extensive and still expanding, which is attributed to the development of a novel manufacturing techniques (e.g., additive technologies). Currently, the group of hard-to-cut materials mainly includes hardened and stainless steels, titanium, cobalt and nickel alloys, composites, ceramics, as well as the hard clads fabricated by additive techniques. This Special Issue, "Advances in Hard-to-Cut Materials: Manufacturing, Properties, Process Mechanics and Evaluation of Surface Integrity", provides the collection of research papers regarding the various problems correlated with hard-to-cut materials. The analysis of these studies reveals the primary directions regarding the developments in manufacturing methods, characterization, and optimization of hard-to-cut materials.

2021-07-05 Jude Hemanth This book briefly covers internationally contributed chapters with artificial intelligence and applied mathematics-oriented background-details. Nowadays, the world is under attack of intelligent systems covering all fields to make them practical and meaningful for humans. In this sense, this edited book provides the most recent research on use of engineering capabilities for developing intelligent systems. The chapters are a collection from the works presented at the 2nd International Conference on Artificial Intelligence and Applied Mathematics in Engineering held within 09-10-11 October 2020 at the Antalya, Manavgat (Turkey). The target audience of the book covers scientists, experts, M.Sc. and Ph.D. students, post-docs, and anyone interested in intelligent systems and their usage in different problem domains. The book is suitable to be used as a reference work in the courses associated with artificial intelligence and applied mathematics.

2019-02-14 Vivek K. Patel This book presents a wide-ranging review of the latest research and development directions in thermal systems optimization using population-based metaheuristic methods. It helps readers to identify the best methods for their own systems, providing details of mathematical models and algorithms suitable for implementation. To reduce mathematical complexity, the authors focus on optimization of individual components rather than taking on systems as a whole. They employ numerous case studies: heat exchangers; cooling towers; power generators; refrigeration systems; and others. The importance of these subsystems to real-world situations from internal combustion to air-conditioning is made clear. The thermal systems under discussion are analysed using various metaheuristic techniques, with comparative results for different systems. The inclusion of detailed MATLAB® codes in the text will assist readers—researchers, practitioners or students—to assess these techniques for different real-world systems. Thermal System Optimization is a useful tool for thermal design researchers and engineers in academia and industry, wishing to perform thermal system identification with properly optimized parameters. It will be of interest for researchers, practitioners and graduate students with backgrounds in mechanical, chemical and power engineering.

2018-06-15 Kim, Dookie The disciplines of science and engineering rely heavily on the forecasting of prospective constraints for concepts that have not yet been proven to exist, especially in areas such as artificial intelligence. Obtaining quality solutions to the problems presented becomes increasingly difficult due to the number of steps required to sift through the possible solutions, and the ability to solve such problems relies on the recognition of patterns and the categorization of data into specific sets. Predictive modeling and optimization methods allow unknown events to be categorized based on statistics and classifiers input by researchers. The Handbook of Research on Predictive Modeling and Optimization Methods in Science and Engineering is a critical reference source that provides comprehensive information on the use of optimization techniques and predictive models to solve real-life engineering and science problems. Through discussions on techniques such as robust design optimization, water level prediction, and the prediction of human actions, this publication identifies solutions to developing problems and new solutions for existing

problems, making this publication a valuable resource for engineers, researchers, graduate students, and other professionals.
2014-09-26 Hélder Rodrigues Modern engineering processes and tasks are highly complex, multi- and interdisciplinary, requiring the cooperative effort of different specialists from engineering, mathematics, computer science and even social sciences. Optimization methodologies are fundamental instruments to tackle this complexity, giving the possibility to unite synergistically team members' inputs and thus decisively contribute to solving new engineering technological challenges. With this context in mind, the main goal of Engineering Optimization 2014 is to unite engineers, applied mathematicians, computer and other applied scientists working on research, development and practical application of optimization methods applied to all engineering disciplines, in a common scientific forum to present, analyze and discuss the latest developments in this area. Engineering Optimization 2014 contains the edited papers presented at the 4th International Conference on Engineering Optimization (ENGOPT2014, Lisbon, Portugal, 8-11 September 2014). ENGOPT2014 is the fourth edition of the biennial "International Conference on Engineering Optimization". The first conference took place in 2008 in Rio de Janeiro, the second in Lisbon in 2010 and the third in Rio de Janeiro in 2012. The contributing papers are organized around the following major themes: - Numerical Optimization Techniques - Design Optimization and Inverse Problems - Effi cient Analysis and Reanalysis Techniques - Sensitivity Analysis - Industrial Applications - Topology Optimization For Structural Static and Dynamic Failures - Optimization in Oil and Gas Industries - New Advances in Derivative-Free Optimization Methods for Engineering Optimization - Optimization Methods in Biomechanics and Biomedical Engineering - Optimization of Laminated Composite Materials - Inverse Problems in Engineering Engineering Optimization 2014 will be of great interest to engineers and academics in engineering, mathematics and computer science.
2018-06-29 Weidong Li This book reports on the latest research and applications in the fields of sustainable manufacturing and remanufacturing, as well as process planning and optimization technologies. It introduces innovative algorithms, methodologies, industrial case studies and applications. It focuses on two topics: sustainable manufacturing for machining technologies and remanufacturing of waste electronic equipment, and various methods are covered for each one, including macro process planning, dynamic scheduling, selective disassembly planning and cloud-based disassembly planning. The experimental analysis provided for every method explains the benefits, as well as how they are sustainable for various real-world applications. Further, a theoretical analysis and algorithm design is presented for each, accompanied by the contributors' relevant research, including: • step-by-step guides; • application scenarios; • relevant literature surveys; • implementation details and case studies; and • critical reviews on the relevant technologies. This book is a valuable resource for researchers in sustainable manufacturing, remanufacturing and product lifecycle management communities, as well as practicing engineers and decision-makers in industry and all those interested in sustainable product development. It is also useful reading material for postgraduates and academics wanting to conduct relevant research, and a reference resource for manufacturing engineers developing innovative tools and methodologies.
2018-10-19 Hakim Hacid The two-volume set LNCS 11233 and LNCS 11234 constitutes the proceedings of the 19th International Conference on Web Information Systems Engineering, WISE 2018, held in Dubai, United Arab Emirates, in November 2018. The 48 full papers and 21 short papers presented were carefully reviewed and selected from 209 submissions. The papers are organized in topical sections on blockchain, security, social network and security, social network, microblog data analysis, graph data, information extraction, text mining, recommender systems, medical data analysis, Web services and cloud computing, data stream and distributed computing, data mining techniques, entity linkage and semantics, Web applications, and data mining applications.
2016-11-30 Chattrakul Sombattheera This book constitutes the refereed conference proceedings of the 10th International Conference on Multi-

disciplinary Trends in Artificial Intelligence, MIWAI 2016, held in Chiang Mai, Thailand, in December 2016. The 22 revised full papers presented together with 5 short papers and 2 abstracts of invited talks were carefully reviewed and selected from 50 submissions. The workshop solicits papers from all areas of AI including cognitive science; computational intelligence; computational philosophy; game theory; machine learning; multi-agent systems; natural language; representation and reasoning; speech; vision and the web; as well as applications of AI in big data; bioinformatics; biometrics; decision support; e-commerce; image processing; analysis and retrieval; industrial applications; knowledge management; privacy; recommender systems; security; software engineering; spam filtering; surveillance; telecommunications; and web services.

2017-09-08 Dumitru Luca This book presents selected contributions to the 16th International Conference on Global Research and Education Inter-Academia 2017 hosted by Alexandru Ioan Cuza University of Iași, Romania from 25 to 28 September 2017. It is the third volume in the series, following the editions from 2015 and 2016. Fundamental and applied research in natural sciences have led to crucial developments in the ongoing 4th global industrial revolution, in the course of which information technology has become deeply embedded in industrial management, research and innovation – and just as deeply in education and everyday life. Materials science and nanotechnology, plasma and solid state physics, photonics, electrical and electronic engineering, robotics and metrology, signal processing, e-learning, intelligent and soft computing have long since been central research priorities for the Inter-Academia Community (I-AC) – a body comprising 14 universities and research institutes from Japan and Central/East-European countries that agreed, in 2002, to coordinate their research and education programs so as to better address today’s challenges. The book is intended for use in academic, government, and industrial R&D departments as a reference tool in research and technology education. The 42 peer-reviewed papers were written by more than 119 leading scientists from 14 countries, most of them affiliated to the I-AC.

2023-05-13 Xingxing Zhang This book investigates three main characteristics of future urban energy system for buildings, including flexibility, resilience and optimization. It explores the energy flexibility by considering renewable energy integration with buildings, sector coupling, and energy trading in the local energy market. Energy resilience is addressed from aspects of future climate change, pandemic crisis, and operational uncertainties. Approaches for system design, dynamic pricing and advanced control are discussed for the optimization of urban energy system. Knowledge from this book contributes to the effective means in future urban energy paradigm to closely integrate multiple energy systems (i.e., distribution, mobility, production and storage) with different energy carriers (i.e., heat, electricity) in an optimal manner for energy use. It would facilitate the envision of next-generation urban energy systems, towards sustainability, resilience and prosperity. This book targets at a broad readership with specific experience and knowledge in energy system, transport, built environment and urban planning. As such, it will appeal to researchers, graduate students, engineers, consultants, urban scientists, investors and policymakers, with interests in energy flexibility, building/city resilience and climate neutrality.

2014-08-12 Henry Selvaraj This collection of proceedings from the International Conference on Systems Engineering, Las Vegas, 2014 is orientated toward systems engineering, including topics like aero-space, power systems, industrial automation and robotics, systems theory, control theory, artificial intelligence, signal processing, decision support, pattern recognition and machine learning, information and communication technologies, image processing, and computer vision as well as its applications. The volume’s main focus is on models, algorithms, and software tools that facilitate efficient and convenient utilization of modern achievements in systems engineering.

2022-09-01 Joong Hoon Kim The book covers different aspects of real-world applications of optimization algorithms. It provides insights from the Seventh International Conference on Harmony Search, Soft Computing and

Applications held at Virtual Conference, Seoul, South Korea, in February 2022. Harmony search (HS) is one of the most popular metaheuristic algorithms, developed in 2001 by Prof. Joong Hoon Kim and Prof. Zong Woo Geem, that mimics the improvisation process of jazz musicians to seek the best harmony. The book consists of research articles on novel and newly proposed optimization algorithms; the theoretical study of nature-inspired optimization algorithms; numerically established results of nature-inspired optimization algorithms; and real-world applications of optimization algorithms and synthetic benchmarking of optimization algorithms.
2018-06-18 Bijaya Ketan Panigrahi The book provides insights into International Conference on Smart Innovations in Communications and Computational Sciences (ICSICCS 2017) held at North West Group of Institutions, Punjab, India. It presents new advances and research results in the fields of computer and communication written by leading researchers, engineers and scientists in the domain of interest from around the world. The book includes research work in all the areas of smart innovation, systems and technologies, embedded knowledge and intelligence, innovation and sustainability, advance computing, networking and informatics. It also focuses on the knowledge-transfer methodologies and innovation strategies employed to make this happen effectively. The combination of intelligent systems tools and a broad range of applications introduce a need for a synergy of disciplines from science and technology. Sample areas include, but are not limited to smart hardware, software design, smart computing technologies, intelligent communications and networking, web and informatics and computational sciences.
2012-12-06 Herbert Fischer The authors of this Festschrift prepared these papers to honour and express their friendship to Klaus Ritter on the occasion of his sixtieth birthday. Be cause of Ritter's many friends and his international reputation among math ematicians, finding contributors was easy. In fact, constraints on the size of the book required us to limit the number of papers. Klaus Ritter has done important work in a variety of areas, especially in var ious applications of linear and nonlinear optimization and also in connection with statistics and parallel computing. For the latter we have to mention Rit ter's development of transputer workstation hardware. The wide scope of his research is reflected by the breadth of the contributions in this Festschrift. After several years of scientific research in the U.S., Klaus Ritter was ap pointed as full professor at the University of Stuttgart. Since then, his name has become inextricably connected with the regularly scheduled conferences on optimization in Oberwolfach. In 1981 he became full professor of Applied Mathematics and Mathematical Statistics at the Technical University of Mu nich. In addition to his university teaching duties, he has made the activity of applying mathematical methods to problems of industry to be centrally important.