

Arduino Based Automatic Plant Watering System

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Proceedings of the Multimedia University Engineering Conference (MECON 2022) - Mohamad Yusoff bin Alias 2023

This is an open access book. The Multimedia University Engineering Conference 2022 (MECON 2022) aims to bring together related research scholars, educators, practitioners, policy makers, enthusiasts, fellow students, and industries to share and exchange their research experiences and results on all aspects of engineering technologies from various perspectives, disciplines, and fields. It also offers an interdisciplinary platform for all stakeholders to present and discuss the most latest trends, innovations, and concerns as well as practical challenges encountered, and solutions adopted in the realm of engineering technologies. This conference is being co-organised by the Faculty of Engineering (FOE) and Faculty of Engineering and Technology (FET), Multimedia University. MECON 2022 carries the theme 'Sustainable Engineering for a Sustainable Future'.

Artificial Intelligence and Renewables Towards an Energy Transition - Mustapha Hatti 2020-12-17

This proceedings book emphasizes adopting artificial intelligence-based and sustainable energy efficiency integrated with clear objectives, to involve researchers, students, and specialists in their development and implementation adequately in achieving objectives. The integration of artificial intelligence into renewable energetic systems would allow the rapid development of a knowledge-based economy suitable to the energy transition, while fully integrating the renewables into the global economy. This is how artificial intelligence has hand in by conceptualizing this transition and above all by saving time. The knowledge economy is valued within the smart cities, which are fast becoming the favorite places where the energy transition will take place efficiently and intelligently by implementing integrated approaches to energy saving and energy supply and integrated urban approaches that go beyond individual interventions in buildings or transport modes using information and communication technologies.

Technologies for Rural Development - Sanjukta Patra 2023-04-21

The book spans across the research domains of mechanisation and automation, agrobusiness, food processing and value addition, climate smart agriculture, rural sanitation, agro biotechnology, and rural energy.

Proceedings of the Third International Conference on Trends in Computational and Cognitive Engineering - M. Shamim Kaiser 2022-02-28

This book presents various computational and cognitive modeling approaches in the areas of health, education, finance, environment, engineering, commerce, and industry. It is a collection of selected conference papers presented at the 3rd International Conference on Trends in Cognitive Computation Engineering (TCCE 2021), hosted online by Universiti Tun Hussein Onn Malaysia (UTHM) during October 21–22, 2021. It shares cutting-edge insights and ideas from mathematicians, engineers, scientists, and researchers and discusses fresh

perspectives on problem solving in a range of research areas.

Information and Communication Technologies - Juan Pablo Salgado Guerrero 2021-11-23

This book constitutes refereed proceedings of the 9th Conference on Information and Communication Technologies of Ecuador, TICEC 2021, held at the Universidad Politécnica Salesiana (UPS) campus in November 2021. The conference was organized in hybrid mode. The 24 full papers were carefully reviewed and selected from 126 qualified submissions. The papers cover a great variety of topics, such as data mining, neural networks, cyberphysical systems, telemedicine, traffic simulation, geospatial information, human-machine interaction, cloud computing, and others. The contributions are divided into the following thematic blocks: □Data Science, ICT & Applications, Industry 4.0, Technology and Environment, Biomedical Sensors and Wearables Systems.

AI, Edge and IoT-based Smart Agriculture - Ajith Abraham 2021-11-10

AI, Edge, and IoT Smart Agriculture integrates applications of IoT, edge computing, and data analytics for sustainable agricultural development and introduces Edge of Thing-based data analytics and IoT for predictability of crop, soil, and plant disease occurrence for improved sustainability and increased profitability. The book also addresses precision irrigation, precision horticulture, greenhouse IoT, livestock monitoring, IoT ecosystem for agriculture, mobile robot for precision agriculture, energy monitoring, storage management, and smart farming. The book provides an overarching focus on sustainable environment and sustainable economic development through smart and e-agriculture. Providing a medium for the exchange of expertise and inspiration, contributions from both smart agriculture and data mining researchers around the world provide foundational insights. The book provides practical application opportunities for the resolution of real-world problems, including contributions from the data mining, data analytics, Edge of Things, and cloud research communities working in the farming production sector. The book offers broad coverage of the concepts, themes, and instruments of this important and evolving area of IOT-based agriculture, Edge of Things and cloud-based farming, Greenhouse IOT, mobile agriculture, sustainable agriculture, and big data analytics in agriculture toward smart farming. Integrates sustainable agriculture, Greenhouse IOT, precision agriculture, crops monitoring, crops controlling to prediction, livestock monitoring, and farm management Presents data mining techniques for precision agriculture, including weather prediction, plant disease prediction, and decision support for crop and soil selection Promotes the importance and uses in managing the agro ecosystem for food security Emphasizes low energy usage options for low cost and environmental sustainability

Proceedings of the International Conference on Artificial Intelligence and Computer Vision (AICV2021) - Aboul Ella Hassanien 2021-05-28

This book presents the 2nd International Conference on

Artificial Intelligence and Computer Visions (AICV 2021) proceeding, which took place in Settat, Morocco, from June 28- to 30, 2021. AICV 2021 is organized by the Scientific Research Group in Egypt (SRGE) and the Computer, Networks, Mobility and Modeling Laboratory (IR2M), Hassan 1st University, Faculty of Sciences Techniques, Settat, Morocco. This international conference highlighted essential research and developments in the fields of artificial intelligence and computer visions. The book is divided into sections, covering the following topics: Deep Learning and Applications; Smart Grid, Internet of Things, and Mobil Applications; Machine Learning and Metaheuristics Optimization; Business Intelligence and Applications; Machine Vision, Robotics, and Speech Recognition; Advanced Machine Learning Technologies; Big Data, Digital Transformation, AI and Network Analysis; Cybersecurity; Feature Selection, Classification, and Applications.

Smart Systems: Innovations in Computing - Arun K. Somani 2021-09-03

This book features original papers from the 3rd International Conference on Smart IoT Systems: Innovations and Computing (SSIC 2021), presenting scientific work related to smart solution concepts. It discusses scientific works related to smart solutions concept in the context of computational collective intelligence consisted of interaction between smart devices for smart environments and interactions. Thanks to the high-quality content and the broad range of the topics covered, the book appeals to researchers pursuing advanced studies.

Sustainable Communication Networks and Application - P. Karrupusamy 2022-01-17

This book includes high-quality research papers presented at 3rd International Conference on Sustainable Communication Networks and Applications (ICSCN 2021), which is held at Surya Engineering College (SEC), Erode, India, during 29–30 July 2021. This book includes novel and state-of-the-art research discussions that articulate and report all research aspects, including theoretical and experimental prototypes and applications that incorporate sustainability into emerging applications. The book discusses and articulates emerging challenges in significantly reducing the energy consumption of communication systems and also explains development of a sustainable and energy-efficient mobile and wireless communication network. It includes best selected high-quality conference papers in different fields such as Internet of Things, cloud computing, data mining, artificial intelligence, machine learning, autonomous systems, deep learning, neural networks, renewable energy sources, sustainable wireless communication networks, QoS, network sustainability, and many other related areas.

ICT Analysis and Applications - Simon Fong 2022-11-05

This book proposes new technologies and discusses future solutions for ICT design infrastructures, as reflected in high-quality papers presented at the 7th International Conference on ICT for Sustainable Development (ICT4SD 2022), held in Goa, India, on July 29–30, 2022. The book covers the topics such as big data and data mining, data fusion, IoT programming toolkits and frameworks, green communication systems and network, use of ICT in smart cities, sensor networks and embedded system, network and information security, wireless and optical networks, security, trust, and privacy, routing and control protocols, cognitive radio and networks, and natural language processing. Bringing together experts from different countries, the book explores a range of central issues from an international perspective.

Artificial Intelligence and Machine Learning in Satellite Data Processing and Services - Sumit Kumar

2023-01-02

This book, *Artificial Intelligence and Machine Learning in Satellite: Data Processing and Services*, presents the selected proceedings of the International Conference on Small Satellites (ICSS 2022) that aims to provide an opportunity for academicians, scientists, researchers, and industry experts, engaged in teaching, research, and development on satellite data processing and its services by employing advanced artificial intelligence-based machine learning techniques. This book covers the application of artificial intelligence and machine learning techniques in various domains of earth observations like natural resources and environmental management, water resources, urban and rural development, climate change, and other contemporary subjects. The book will surely be a valuable asset for beginners, researchers, and professionals working in satellite data processing and services using artificial intelligence and machine learning approaches.

Cloud IoT Systems for Smart Agricultural Engineering - Saravanan Krishnan 2022-02-14

Agriculture plays a vital role in a country's growth. Modern-day technologies drive every domain toward smart systems. The use of traditional agricultural procedures to satisfy modern-day requirements is a challenging task. *Cloud IoT Systems for Smart Agricultural Engineering* provides substantial coverage of various challenges of the agriculture domain through modern technologies such as the Internet of Things (IoT), cloud computing, and many more. This book offers various state-of-the-art procedures to be deployed in a wide range of agricultural activities. The concepts are discussed with the necessary implementations and clear examples. Necessary illustrations are depicted in the chapters to ensure the effective delivery of the proposed concepts. It presents the rapid advancement of the technologies in the existing agricultural model by applying the cloud IoT techniques. A wide variety of novel architectural solutions are discussed in various chapters of this book. This book provides comprehensive coverage of the most essential topics, including: New approaches on urban and vertical farming Smart crop management for Indian farmers Smart livestock management Precision agriculture using geographical information systems Machine learning techniques combined with IoT for smart agriculture Effective use of drones in smart agriculture This book provides solutions for the diverse domain of problems in agricultural engineering. It can be used at the basic and intermediary levels for agricultural science and engineering graduate students, researchers, and practitioners.

Advances in Interdisciplinary Engineering - Niraj Kumar 2021-04-12

This book comprises the select proceedings of the International Conference on Future Learning Aspects of Mechanical Engineering (FLAME) 2020. This volume focuses on several emerging interdisciplinary areas involving mechanical engineering. Some of the topics covered include automobile engineering, mechatronics, applied mechanics, structural mechanics, hydraulic mechanics, human vibration, biomechanics, biomedical Instrumentation, ergonomics, biodynamic modeling, nuclear engineering, and agriculture engineering. The contents of this book will be useful for students, researchers as well as professionals interested in interdisciplinary topics of mechanical engineering.

Securing the Internet of Things: Concepts, Methodologies, Tools, and Applications - Management Association, Information Resources 2019-09-06

The ubiquity of modern technologies has allowed for increased connectivity between people and devices across the globe. This connected infrastructure of networks creates numerous opportunities for applications and uses. As the applications of the internet of things continue to progress so do the security concerns for

this technology. The study of threat prevention in the internet of things is necessary as security breaches in this field can ruin industries and lives. Securing the Internet of Things: Concepts, Methodologies, Tools, and Applications is a vital reference source that examines recent developments and emerging trends in security and privacy for the internet of things through new models, practical solutions, and technological advancements related to security. Highlighting a range of topics such as cloud security, threat detection, and open source software, this multi-volume book is ideally designed for engineers, IT consultants, ICT procurement managers, network system integrators, infrastructure service providers, researchers, academics, and professionals interested in current research on security practices pertaining to the internet of things.

Creative DIY Microcontroller Projects with TinyGo and WebAssembly - Tobias Theel 2021-05-14

Explore embedded programming, and get hands-on with real-world embedded projects relating to IoT, low-powered devices, and other complex systems using TinyGo and WebAssembly Key Features Build creative embedded apps with TinyGo using low-powered devices and microcontrollers Understand the practicality involved in integrating hardware and sensors while programming them using TinyGo Use TinyGo in modern browsers to display embedded applications' statistics on WebAssembly dashboards Book Description While often considered a fast and compact programming language, Go usually creates large executables that are difficult to run on low-memory or low-powered devices such as microcontrollers or IoT. TinyGo is a new compiler that allows developers to compile their programs for such low-powered devices. As TinyGo supports all the standard features of the Go programming language, you won't have to tweak the code to fit on the microcontroller. This book is a hands-on guide packed full of interesting DIY projects that will show you how to build embedded applications. You will learn how to program sensors and work with microcontrollers such as Arduino UNO and Arduino Nano IoT 33. The chapters that follow will show you how to develop multiple real-world embedded projects using a variety of popular devices such as LEDs, 7-segment displays, and timers. Next, you will progress to build interactive prototypes such as a traffic lights system, touchless hand wash timer, and more. As you advance, you'll create an IoT prototype of a weather alert system and display those alerts on the TinyGo WASM dashboard. Finally, you will build a home automation project that displays stats on the TinyGo WASM dashboard. By the end of this microcontroller book, you will be equipped with the skills you need to build real-world embedded projects using the power of TinyGo. What you will learn Discover a variety of TinyGo features and capabilities while programming your embedded devices Explore how to use display devices to present your data Focus on how to make TinyGo interact with multiple sensors for sensing temperature, humidity, and pressure Program hardware devices such as Arduino Uno and Arduino Nano IoT 33 using TinyGo Understand how TinyGo works with GPIO, ADC, I2C, SPI, and MQTT network protocols Build your first TinyGo IoT and home automation prototypes Integrate TinyGo in modern browsers using WebAssembly Who this book is for If you are a Go developer who wants to program low-powered devices and hardware such as Arduino UNO and Arduino Nano IoT 33, or if you are a Go developer who wants to extend your knowledge of using Go with WebAssembly while programming Go in the browser, then this book is for you. Go hobbyist programmers who are interested in learning more about TinyGo by working through the DIY projects covered in the book will also find this hands-on guide useful.

Handbook of Research on the Internet of Things Applications in Robotics and Automation - Singh, Rajesh 2019-09-13

With near-universal internet access and ever-advancing electronic devices, the ability to facilitate interactions between various hardware and software provides endless possibilities. Though internet of things (IoT) technology is becoming more popular among individual users and companies, more potential applications of this technology are being sought every day. There is a need for studies and reviews that discuss the methodologies, concepts, and possible problems of a technology that requires little or no human interaction between systems. The Handbook of Research on the Internet of Things Applications in Robotics and Automation is a pivotal reference source on the methods and uses of advancing IoT technology. While highlighting topics including traffic information systems, home security, and automatic parking, this book is ideally designed for network analysts, telecommunication system designers, engineers, academicians, technology specialists, practitioners, researchers, students, and software developers seeking current research on the trends and functions of this life-changing technology.

2019 2nd International Conference on Innovations in Electronics, Signal Processing and Communication (IESC) - IEEE Staff 2019-03

The aim of the conference is to provide a platform for academicians, researchers and engineers to disseminate, interact and discuss about the various current research findings, recent development and future trends in the areas of Electronics, Signal processing and Communications This conference encourages the dissemination of R&D linked to the Industry The program includes expert lectures, oral, poster and demo presentations

Examining the Impact of Deep Learning and IoT on Multi-Industry Applications - Raut, Roshani 2021-01-29

Deep learning, as a recent AI technique, has proven itself efficient in solving many real-world problems. Deep learning algorithms are efficient, high performing, and an effective standard for solving these problems. In addition, with IoT, deep learning is in many emerging and developing domains of computer technology. Deep learning algorithms have brought a revolution in computer vision applications by introducing an efficient solution to several image processing-related problems that have long remained unresolved or moderately solved. Various significant IoT technologies in various industries, such as education, health, transportation, and security, combine IoT with deep learning for complex problem solving and the supported interaction between human beings and their surroundings. Examining the Impact of Deep Learning and IoT on Multi-Industry Applications provides insights on how deep learning, together with IoT, impacts various sectors such as healthcare, agriculture, cyber security, and social media analysis applications. The chapters present solutions to various real-world problems using these methods from various researchers' points of view. While highlighting topics such as medical diagnosis, power consumption, livestock management, security, and social media analysis, this book is ideal for IT specialists, technologists, security analysts, medical practitioners, imaging specialists, diagnosticians, academicians, researchers, industrial experts, scientists, and undergraduate and postgraduate students who are working in the field of computer engineering, electronics, and electrical engineering.

Computational Intelligence in Data Science - Aravindan Chandrabose 2020-11-20

This book constitutes the refereed post-conference proceedings of the Third IFIP TC 12 International Conference on Computational Intelligence in Data Science, ICCIDS 2020, held in Chennai, India, in February 2020. The 19 revised full papers and 8 revised short papers presented were carefully reviewed and

selected from 94 submissions. The papers are organized in the following topical sections: computational intelligence for text analysis; computational intelligence for image and video analysis; and data science.

Internet of Things: Usage And Application - Zakiah Ayop
ISBN : 978-967-2145-33-2 Authors : Zakiah Ayop & Nurul Azma Zakaria
The main goal of this book is to encourage both researchers and practitioners to share and exchange their experiences and recent studies between academia and industry. The overall objectives are: * To improve the awareness of readers about IoT concepts, technologies and application areas. * To present case-studies and innovative applications of the IoT. * To highlight and discuss the recent development and emerging trends in the IoT. * To propose new models, practical solutions and technological advances of the IoT. * To address implementation issues and challenges.

Smart Structures in Energy Infrastructure - Anita Khosla
2022-01-12

This book gathers selected high-quality research papers presented at International Conference on Renewable Technologies in Engineering (ICRTE 2021) organized by Manav Rachna International Institute of Research & Studies, Faridabad, Haryana, India, during 15–16 April 2021. The book includes conference papers on the theme “Computational Techniques for Renewable Energy Optimization”, which aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of renewable energy integration, planning, control and optimization. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends and concerns as well as practical challenges encountered and solutions adopted in the fields of smart structures in energy infrastructure.

Cybernetics, Cognition and Machine Learning Applications
- Vinit Kumar Gunjan 2022-09-15

This book includes the original, peer-reviewed research articles from the 3rd International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA 2021), held in August 21 – 22, 2021, at Goa, India. It covers the latest research trends or developments in areas of data science, artificial intelligence, neural networks, cognitive science and machine learning applications, cyber physical systems and cybernetics.

2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN) - IEEE Staff 2019-03-30

The International Conference on Vision Towards Emerging Trends in Communication and Networking (VITECON 2019) is the premier forum for the presentation of new advances and research results in the fields of Electronics and Communication Engineering. The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world.

Management Strategies for Water Use Efficiency and Micro Irrigated Crops - Megh R. Goyal 2019-02-01

Management Strategies for Water Use Efficiency and Micro Irrigated Crops presents new research and technologies for making better use of water resources for agricultural purposes. The chapters focus on better management to improve allocation and irrigation water efficiency and look at performance factors as well. Chapters look at irrigation technology, environmental conditions, and scheduling of water application. One section of the book focuses on water management in the cultivation of sugarcane, a very important industrial crop used in many fields. Other sections are devoted to principles and challenging technologies, water use efficiency for drip-irrigated crops, performance of fertigated rice under micro irrigation, and evaluation

of performance of drip-irrigated crops. This valuable book is a must for those struggling to find ways to address the need to maintain efficient crop production in the midst of water shortages. With chapters from hands-on experts in the field, the book will be an invaluable reference and guide to effective micro irrigation methods.

Arduino Adventures - James Floyd Kelly 2013-03-21
Arduino Adventures: Escape from Gemini Station provides a fun introduction to the Arduino microcontroller by putting you (the reader) into the action of a science fiction adventure story. You'll find yourself following along as Cade and Elle explore Gemini Station—an orbiting museum dedicated to preserving and sharing technology throughout the centuries. Trouble ensues. The station is evacuated, including Cade and Elle's class that was visiting the station on a field trip. Cade and Elle don't make it aboard their shuttle and are trapped on the station along with a friendly artificial intelligence named Andrew who wants to help them get off the damaged station. Using some old hardware, a laptop, and some toolboxes full of electronics parts, you will follow along and build eight gizmos with Cade and Elle that will help them escape from Gemini Station. The hardware is Arduino. Each new challenge opens a new area of Arduino and basic electronics knowledge. You'll be taken incrementally from a simple task such as turning on a light through to a complex combination of microcontroller, electronic components, and software programming. By the end of the book you'll be well on your way towards being able to create and implement any sort of electronically controlled device you can imagine, using the stunningly popular Arduino microcontroller. Provides eight challenges, each challenge increasing in complexity. Builds around a fictional storyline that keeps the learning fun. Leaves you on a solid foundation of electronic skills and knowledge.

Getting Started with Arduino - Massimo Banzi 2011-09-13
Presents an introduction to the open-source electronics prototyping platform.

Smartphone-Based Detection Devices - Chaudhery Mustansar Hussain 2021-08-21

Smartphone usage has created a new means for detection, analysis, diagnosis and monitoring through the use of new apps and attachments. These breakthrough analytical methods offer ways to overcome the drawbacks of more conventional methods, such as the expensive instrumentation that is often needed, complex sample pre-treatment steps, or time-consuming procedures. Smartphone-Based Detection Devices: Emerging Trends in Analytical Techniques gathers these modern developments in smartphone analytical methods into one comprehensive source, covering recent advancements in analytical tools while paying special attention to the most accurate, highly efficient approaches. Serving as a guide not only to analytical chemists but also to environmentalists, biotechnologists, pharmacists, forensic scientists and toxicologists, Smartphone-Based Detection Devices: Emerging Trends in Analytical Techniques is an important source for researchers who require accurate analysis of their on- and off-site samples. Students in these fields at the graduate and post-graduate level will also benefit from this topical and comprehensive book. Provides an integrated approach for advanced analytical methods and techniques using smartphones. Covers the usage of smartphones in sample prep, integration and detection stages of analytical chemistry. Applicable for researchers of all levels, from graduate students to professionals.

4th Scientific International Conference Najaf - 2019

Beginning Arduino - Michael McRoberts 2011-07-29
In Beginning Arduino, you will learn all about the popular Arduino microcontroller by working your way

through an amazing set of 50 cool projects. You'll progress from a complete beginner regarding Arduino programming and electronics knowledge to intermediate skills and the confidence to create your own amazing Arduino projects. Absolutely no experience in programming or electronics required! Rather than requiring you to wade through pages of theory before you start making things, this book has a hands-on approach. You will dive into making projects right from the start, learning how to use various electronic components and how to program the Arduino to control or communicate with those components. Each project is designed to build upon the knowledge learned in earlier projects and to further your knowledge in programming as well as skills with electronics. By the end of the book you will be able create your own projects confidently and with creativity. Please note: the print version of this title is black & white; the eBook is full color. You can download the color diagrams in the book from <http://www.apress.com/9781430232407>

Biophilic and Bioclimatic Architecture - Amjad Almusaed 2010-12-21

Biophilic and Bioclimatic Architecture is a guide to innovative architectural design for architects, engineers and other specialists who are working with biophilic and bioclimatic architectural concepts. Biophilic and Bioclimatic Architecture has three parts:

- Part I focuses on the relationship between architecture and human needs and the creation process, demonstrating the meaning of architectural value in architectural hypothesis.
- Part II opens the way towards a new understanding of biophilic architecture as a response to the negative actions of humans and the negative effects of using natural resources.
- Part III shows the benefits of combining the effects of the climate with the notion of human comfort in bioclimatic architecture.

Inventive Systems and Control - V. Suma 2021-06-07

This book presents selected papers from the 5th International Conference on Inventive Systems and Control (ICISC 2021), held on 7–8 January 2021 at JCT College of Engineering and Technology, Coimbatore, India. The book includes an analysis of the class of intelligent systems and control techniques that utilises various artificial intelligence technologies, where there are no mathematical models and systems available to make them remain controlled. Inspired by various existing intelligent techniques, the primary goal is to present the emerging innovative models to tackle the challenges faced by the existing computing and communication technologies. The proceedings of ICISC 2021 aim at presenting the state-of-the-art research developments, trends, and solutions for the challenges faced by the intelligent systems and control community with the real-world applications. The included research articles feature the novel and unpublished research works on intelligent system representation and control.

Modern Electronics Devices and Communication Systems - Rajeev Agrawal 2023-02-18

This book presents select and peer-reviewed proceedings of the International Conference on Smart Communication and Imaging Systems (MEDCOM 2021). The contents explore the recent technological advances in the field of next-generation electronics devices and communication systems. The topics include the design and development of smart, secure, and reliable future communication networks; satellite, radar, and microwave techniques for intelligent communication. The book also covers methods and applications of GIS and remote sensing; medical image analysis and its applications in smart health. This book can be useful for students, researchers, and professionals working in the field of communication systems and image processing.

Intelligent Systems in Big Data, Semantic Web and Machine Learning - Noreddine Gherabi 2021-05-28

This book describes important methodologies, tools and techniques from the fields of artificial intelligence, basically those which are based on relevant conceptual and formal development. The coverage is wide, ranging from machine learning to the use of data on the Semantic Web, with many new topics. The contributions are concerned with machine learning, big data, data processing in medicine, similarity processing in ontologies, semantic image analysis, as well as many applications including the use of machine learning techniques for cloud security, artificial intelligence techniques for detecting COVID-19, the Internet of things, etc. The book is meant to be a very important and useful source of information for researchers and doctoral students in data analysis, Semantic Web, big data, machine learning, computer engineering and related disciplines, as well as for postgraduate students who want to integrate the doctoral cycle.

Resilient and Responsible Smart Cities - Hugo Rodrigues 2022-07-22

This book gathers current research studies which explore new technologies in architecture and urban practices which ensure the efficient management of cities' infrastructures and provide new solutions to the complex complications that may result in the tackling of challenges of population density, traffic planning, and city planning at the neighborhood scale or rather the scale of buildings and everyday life. It offers a path towards city resilience and sustainable infrastructure with the aim of meeting the demands of mega-cities. The primary audience of this book will be academics and professionals from the fields of architecture, urban planning, civil engineering, computer sciences, and mathematics. The book will aid them in their contributions to the implementation of sustainable development goals.

Machine Intelligence and Smart Systems - Shikha Agrawal 2022-05-23

This book is a collection of peer-reviewed best selected research papers presented at the Second International Conference on Machine Intelligence and Smart Systems (MISS 2021), organized during September 24–25, 2021, in Gwalior, India. The book presents new advances and research results in the fields of machine intelligence, artificial intelligence and smart systems. It includes main paradigms of machine intelligence algorithms, namely (1) neural networks, (2) evolutionary computation, (3) swarm intelligence, (4) fuzzy systems and (5) immunological computation. Scientists, engineers, academicians, technology developers, researchers, students and government officials will find this book useful in handling their complicated real-world issues by using machine intelligence methodologies.

Information Management and Machine Intelligence - Dinesh Goyal 2020-09-16

This book features selected papers presented at the International Conference on Information Management and Machine Intelligence (ICIMMI 2019), held at the Poornima Institute of Engineering & Technology, Jaipur, Rajasthan, India, on December 14–15, 2019. It covers a range of topics, including data analytics; AI; machine and deep learning; information management, security, processing techniques and interpretation; applications of artificial intelligence in soft computing and pattern recognition; cloud-based applications for machine learning; application of IoT in power distribution systems; as well as wireless sensor networks and adaptive wireless communication.

Biologically Inspired Techniques in Many Criteria Decision Making - Satchidananda Dehuri 2022-06-03

This book includes best-selected, high-quality research papers presented at Second International Conference on Biologically Inspired Techniques in Many Criteria Decision Making (BITMDM 2021) organized by Department of

Information & Communication Technology, Fakir Mohan University, Balasore, Odisha, India, during December 20-21, 2021. This proceeding presents the recent advances in techniques which are biologically inspired and their usage in the field of many criteria decision making. The topics covered are biologically inspired algorithms, nature-inspired algorithms, multi-criteria optimization, multi-criteria decision making, data mining, big-data analysis, cloud computing, IOT, machine learning and soft computing, smart technologies, crypt-analysis, cognitive informatics, computational intelligence, artificial intelligence and machine learning, data management exploration and mining, computational intelligence, and signal and image processing.

Advances in Information and Communication Technologies for Adapting Agriculture to Climate Change II - Juan Carlos Corrales 2018-11-20

This book presents novel communication technology solutions to address the effects of climate change and climate variability on agriculture, with a particular focus on those that increase agricultural production. It discusses decision support and early warning systems for agriculture; information technology (IT) supporting sustainable water management and land cover dynamics;

predictive of crop production models; and software applications for reducing the effects of diseases and pests on crops. Further topics include the real-time monitoring of weather conditions and water quality, as well as food security issues. Featuring the proceedings of the International Conference of ICT for Adapting Agriculture to Climate Change (AACC'18), held on November 21-23, 2018, in Cali, Colombia, the book represents a timely report and a source of new ideas and solutions for both researchers and practitioners active in the agricultural sector around the globe.

Proceedings of International Conference on Wireless Communication - Hari Vasudevan 2018-04-20

The volume comprises best selected papers presented at International Conference on Wireless Communication (ICWiCOM) which is organized by Department of Electronics and Telecommunication Engineering of D J Sanghvi College of Engineering. The volume focusses on narrowed topics of wireless communication like signal and image processing applicable to wireless domain, networking, microwave and antenna designs, tele-medicine systems, etc. The papers are divided into three main domains like, networking, antenna designs and embedded systems applicable to the communication domain. The content will be helpful for Post-Graduate and Doctoral students in their research.