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Intelligent Communication Control And Devices

The 15 chapters in this book explore the theoretical as well as a number of technical research outcomes on all aspects of UAVs. UAVs has widely differing applications such as disaster management, structural inspection, goods delivery, transportation, localization, mapping, pollution and radiation monitoring, search and rescue, farming, etc. The advantages of using UAVs are

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countless and have led the way for the full integration of UAVs, as intelligent objects into the IoT system. The book covers cover such subjects as: Efficient energy management systems in UAV based IoT networks IoE enabled UAVs Mind-controlled UAV using Brain-Computer Interface (BCI) The importance of AI in realizing autonomous and intelligent flying IoT Blockchain-based solutions for various security issues in UAV-enabled IoT The challenges and threats of UAVs such as hijacking, privacy, cyber-security, and physical safety.

Although the effort to involve women in engineering has risen in

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recent years with the creation of new initiatives and the promotion of inclusion in technical disciplines, the active participation of women in engineering professions is continuously lower than expected. While the need for engineers appears to be constantly increasing, women still do not fill most of this role and have a long way to go to even reach an equal split in the field. This gender gap has a significant impact how women in the STEM fields are perceived as well as their experiences in their education and careers. When it comes to Latin American women in IT, their contribution to science can go

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unnoticed, their participation levels in these fields are very low, and they often occupy lower-level positions than their male counterparts. These issues need to be discussed, and the experiences of women who work in the field must be shared. Latin American Women and Research Contributions to the IT Field highlights the important role of Latin American women in IT by collecting and disseminating their frontier-research contributions in order to provide more visibility and inspire greater participation of Latin American women within the major field of computer science. With chapters contributed by

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female authors from eight Latin American and Caribbean countries, the book provides a deep analysis of these women's trajectory paths to high quality theoretical and applied relevant research in computer science and IT. While highlighting areas such as inclusivity and STEM education, along with advancements and achievements in topics that include nonverbal interaction in virtual reality, fuzzy logic applications in education, and ant colony optimization, this book is ideal for professionals, academics, students, and researchers working in the fields of information technologies and computer science as well as those

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Interested in gender and women's studies.

The optimization of traffic management operations has become a considerable challenge in today's global scope due to the significant increase in the number of vehicles, traffic congestions, and automobile accidents. Fortunately, there has been substantial progress in the application of intelligent computing devices to transportation processes. Vehicular ad-hoc networks (VANETs) are a specific practice that merges the connectivity of wireless technologies with smart vehicles. Despite its relevance, empirical research is lacking on the

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developments being made in VANETs and how certain intelligent technologies are being applied within transportation systems. IoT and Cloud Computing Advancements in Vehicular Ad-Hoc Networks provides emerging research exploring the theoretical and practical aspects of intelligent transportation systems and analyzing the modern techniques that are being applied to smart vehicles through cloud technology. Featuring coverage on a broad range of topics such as health monitoring, node localization, and fault tolerance, this book is ideally designed for network designers, developers, analysts, IT

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specialists, computing professionals, researchers, academics, and post-graduate students seeking current research on emerging computing concepts and developments in vehicular ad-hoc networks.

The book is a collection of high-quality, peer-reviewed innovative research papers from the International Conference on Signals, Machines and Automation (SIGMA 2018) held at Netaji Subhas Institute of Technology (NSIT), Delhi, India. The conference offered researchers from academic and industry the opportunity to present their original work and exchange ideas,

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Information, techniques and applications in the field of computational intelligence, artificial intelligence and machine intelligence. The book is divided into two volumes discussing a wide variety of industrial, engineering and scientific applications of the emerging techniques.

This book constitutes the thoroughly refereed proceedings of the 12th International Conference on e-Infrastructure and e-Services for Developing Countries, AFRICOMM 2020, held in Ebene City, Mauritius, in December 2020. Due to COVID-19 pandemic the conference was held virtually. The 20 full papers were carefully

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selected from 90 submissions. The papers are organized in four thematic sections on dynamic spectrum access and mesh networks; wireless sensing and 5G networks; software-defined networking; Internet of Things; e-services and big data; DNS resilience and performance. .

This book features research papers presented at the International Conference on Emerging Technologies in Data Mining and Information Security (IEMIS 2020) held at the University of Engineering & Management, Kolkata, India, during July 2020. The book is organized in three volumes and includes high-quality

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research work by academicians and industrial experts in the field of computing and communication, including full-length papers, research-in-progress papers and case studies related to all the areas of data mining, machine learning, Internet of things (IoT) and information security.

Design, Analysis and Applications of Renewable Energy Systems covers recent advancements in the study of renewable energy control systems by bringing together diverse scientific breakthroughs on the modeling, control and optimization of renewable energy systems as conveyed by leading energy systems engineering

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researchers. The book focuses on present novel solutions for many problems in the field, covering modeling, control theorems and the optimization techniques that will help solve many scientific issues for researchers. Multidisciplinary applications are also discussed, along with their fundamentals, modeling, analysis, design, realization and experimental results. This book fills the gaps between different interdisciplinary applications, ranging from mathematical concepts, modeling, and analysis, up to the realization and experimental work. Presents some of the latest innovative approaches to renewable energy

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systems from the point-of-view of dynamic modeling, system analysis, optimization, control and circuit design Focuses on advances related to optimization techniques for renewable energy and forecasting using machine learning methods Includes new circuits and systems, helping researchers solve many nonlinear problems

This book highlights original research and recent advances in various fields related to smart cities and their applications. It gathers papers presented at the Fourth International Conference on Smart City Applications (SCA19), held on October 2–4, 2019, in Casablanca, Morocco. Bringing together

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contributions by prominent researchers from around the globe, the book offers an invaluable instructional and research tool for courses on computer science, electrical engineering, and urban sciences. It is also an excellent reference guide for professionals, researchers, and academics in the field of smart cities. This book covers topics including:

- Smart Citizenship
- Smart Education
- Digital Business and Smart Governance
- Smart Health Care
- New Generation of Networks and Systems for Smart Cities
- Smart Grids and Electrical Engineering
- Smart Mobility
- Smart Security
- Sustainable Building
- Sustainable

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Environment

[ICICV 2019](#)

[Proceedings of the Third
International Conference on
Microelectronics, Computing and
Communication Systems](#)

[12th EAI International](#)

[Conference, AFRICOMM 2020,
Ebène City, Mauritius, December
2-4, 2020, Proceedings](#)

[Recent Trends in Intelligent
Computing, Communication and
Devices](#)

[Proceedings of the 2nd
International Conference on
Communication and Computing
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[International Conference on
Computers Communications and
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[Arduino and Scilab based Projects
Communication and Computing
Systems](#)

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and Applications](#)

[Intelligent Communication
Technologies and Virtual Mobile
Networks](#)

[Principles and Practices](#)

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Communication and Devices](#)

[Innovations in Bio-Inspired
Computing and Applications](#)

[Design, Analysis and Applications
of Renewable Energy Systems](#)

Intelligent Communication,

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**Control and
Devices Proceedings of
ICICCD 2018 Springer
Nature**

This book focuses on the integration of intelligent communication systems, control systems and devices related to all aspects of engineering and sciences. It includes high-quality research papers from the 4th International Conference on Intelligent Communication, Control and Devices (ICICCD 2020), organized by the Department of Electronics, Instrumentation and Control Engineering at the

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**University of Petroleum and
Energy Studies, Dehradun,
India during 27-28**

**November 2020. The topics
covered are a range of
recent advances in
intelligent communication,
intelligent control, and
intelligent devices.**

**The book focuses on the
integration of intelligent
communication systems,
control systems, and
devices related to all
aspects of engineering and
sciences. It contains high-
quality research papers
presented at the 2nd
international conference,
ICICCD 2017, organized by**

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***the Department of
Electronics,
Instrumentation and
Control Engineering of
University of Petroleum and
Energy Studies, Dehradun
on 15 and 16 April, 2017.
The volume broadly covers
recent advances of
intelligent communication,
intelligent control and
intelligent devices. The
work presented in this book
is original research work,
findings and practical
development experiences
of researchers,
academicians, scientists
and industrial practitioners.
In the history of mankind,***

three revolutions which impact the human life are the tool-making revolution, agricultural revolution and industrial revolution. They have transformed not only the economy and civilization but the overall development of the society. Probably, intelligence revolution is the next revolution, which the society will perceive in the next 10 years. ICCD-2014 covers all dimensions of intelligent sciences, i.e. Intelligent Computing, Intelligent Communication and Intelligent Devices. This volume covers

**contributions from
Intelligent Communication
which are from the areas
such as Communications
and Wireless Ad Hoc &
Sensor Networks, Speech &
Natural Language
Processing, including
Signal, Image and Video
Processing and Mobile
broadband and Optical
networks, which are the
key to the ground-breaking
inventions to intelligent
communication
technologies. Secondly,
Intelligent Device is any
type of equipment,
instrument or machine that
has its own computing**

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capability. Contributions from the areas such as Embedded Systems, RFID, RF MEMS, VLSI Design & Electronic Devices, Analog and Mixed-Signal IC Design and Testing, MEMS and Microsystems, CMOS MEMS, Solar Cells and Photonics, Nano Devices, Single Electron & Spintronics Devices, Space Electronics and Intelligent Robotics are covered in this volume. Cognitive Computing for Human-Robot Interaction: Principles and Practices explores the efforts that should ultimately enable society to take advantage

of the often-heralded potential of robots to provide economical and sustainable computing applications. This book discusses each of these applications, presents working implementations, and combines coherent and original deliberative architecture for human-robot interactions (HRI). Supported by experimental results, it shows how explicit knowledge management promises to be instrumental in building richer and more natural HRI, by pushing for

pervasive, human-level semantics within the robot's deliberative system for sustainable computing applications. This book will be of special interest to academics, postgraduate students, and researchers working in the area of artificial intelligence and machine learning. Key features: Introduces several new contributions to the representation and management of humans in autonomous robotic systems; Explores the potential of cognitive computing, robots, and HRI to generate a deeper

***understanding and to
provide a better
contribution from robots to
society; Engages with the
potential repercussions of
cognitive computing and
HRI in the real world.
Introduces several new
contributions to the
representation and
management of humans in
an autonomous robotic
system Explores cognitive
computing, robots and HRI,
presenting a more in-depth
understanding to make
robots better for society
Gives a challenging
approach to those several
repercussions of cognitive***

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computing and HRI in the actual global scenario
The International Conference on Communication and Computing Systems (ICCCS 2018) provides a high-level international forum for researchers and recent advances in the field of electronic devices, computing, big data analytics, cyber security, quantum computing, biocomputing, telecommunication, etc. The aim of the conference was to bridge the gap between the technological advancements in the

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***industry and the academic
research.***

***This book presents the
outcomes of the Intelligent
Communication***

***Technologies and Virtual
Mobile Networks***

***Conference (ICICV 2019)
held in Tirunelveli, India, on
February 14-15, 2019. It
presents the state of the
art in the field, identifying
emerging research topics
and communication
technologies and defining
the future of intelligent
communication approaches
and virtual computing. In
light of the tremendous
growth ICT, it examines the***

rapid developments in virtual reality in communication technology and high-quality services in mobile networks, including the integration of virtual mobile computing and communication technologies, which permits new technologies based on the resources and services of computational intelligence, big data analytics, Internet of Things (IoT), 5G technology, automation systems, sensor networks, augmented reality, data mining, and vehicular ad hoc networks with massive

cloud-based backend. These services have a significant impact on all areas of daily life, like transportation, e-commerce, health care, secure communication, location detection, smart home, smart city, social networks and many more. Explores the components of automation

DESCRIPTION
Automation is a process to perform controlled activities with minimal human assistance. A lot of research is being carried out in this field. Students are also opting for research and studies in automation.

The objective of this book is to explain the role of industrial automation. This book will help engineering students to understand the basic concepts of industrial automation. The unique feature of this book is the inclusion of multiple-choice questions to help prepare students for competitive exams and interviews. Automation has grown into a vast field and this book will be helpful to understand it comprehensively. KEY FEATURES The book provides basic concepts of industrial automation It is

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beneficial for engineering students having interest in the field of automation The unique feature of this book is the inclusion of multiple-choice questions to help prepare students for competitive exams and interviews It covers the roles of SCADA and PLC in automation WHAT WILL YOU LEARN SCADA and its application in Industrial Automation Supervisory and Control Functions SCADA Communication Network Human Machine Interface SCADA in EMS Programmable Logic Controller Automation

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Software Field

Instrumentation Device

Utility Information System

WHO THIS BOOK IS FOR

Engineering students

**having research interests in
the field of automation.**

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SCADA in Industrial

Automation 2. Ê Ê

Supervisory and Control

Functions 3. Ê Ê SCADA

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Applications of SCADA 8. Ê

Ê Automation Software 9. Ê

Ê Field Instrumentation

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**Device 10. È Utility
Information System
Innovations in Smart Cities
Applications Edition 3
Security and Device
Connectivity, Smart
Environments, and Industry
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**Proceeding of International
Conference on Intelligent
Communication, Control
and Devices
Internet of Things and Big
Data Analytics for Smart
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Proceedings of ICIDCA 2020**

**Emerging Technologies in
Data Mining and
Information Security**

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**Renewable Energy and
Future Power Systems
Proceedings of ICCD 2018
Arduino meets MATLAB:
Interfacing, Programs and
Simulink
Proceedings of the 11th
International Conference on
Innovations in Bio-Inspired
Computing and Applications
(IBICA 2020) held during
December 16-18, 2020
Seville, Spain, May
13th-15th, 2019
Proceedings
Proceedings of IEMIS 2020,
Volume 2
Handbook of IoT and Big
Data**

This book presents the proceedings of

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the International Conference on Computers Communications and Control 2020 (ICCCC2020), covering topics such as theory for computing and communications, integrated solutions in computer-based control, computational intelligence and soft computing, decision-making and support systems. The ICCC was founded in Romania in 2006, and its eight editions have featured respected keynote speakers and leading computer scientists from around the globe.

This book has a focus on the development and deployment of the Industrial Internet of Things (IIoT) paradigm, discussing frameworks, methodologies, benefits and limitations, as well as providing case studies of employing the IoT vision in the industrial domain. IIoT is becoming

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an attractive business reality for many organisations such as manufacturing, logistics, oil and gas, energy and other utilities, mining, aviation, and many more. The opportunities for this paradigm are huge, and according to one report, the IIoT market is predicted to reach \$125 billion by 2021. The driving philosophy behind the IIoT is that smart machines are better than humans at accurately capturing, analysing and communicating real-time data. The underlying technologies include distributed computing, machine learning, artificial intelligence, and machine-to-machine communication, with a typical IIoT system consisting of intelligent systems (applications, controllers, sensors, and security mechanisms), data communication infrastructure (cloud computing, edge computing,

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etc.), data analytics (to support business intelligence and corporate decision making), and most importantly the human element. The promised benefits of the IIoT include enhanced safety, better reliability, smart metering, inventory management, equipment tracking, and facilities management. There are, however, numerous issues that are also becoming the focus of active research, such as concerns regarding service availability, data security, and device communication. Lack of ubiquitous interoperability between heterogeneous devices is also a major concern. This book intends to fill a gap in the IIoT literature by providing the scientific contributions and latest developments from researchers and practitioners of international repute, focusing on frameworks,

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methodologies, benefits, and inherent issues/barriers to connected environments, especially in industrial settings. The intended audience includes network specialists, hardware engineers, and security experts who wish to adopt newer approaches for device connectivity, IoT security, and sensor-based devices design.

University level students, researchers and practitioners will also find the latest innovation in technology and newer approaches relevant to the IIoT from a distributed computing perspective.

This book discusses emerging technologies in the field of the Internet of Things and big data, an area that will be scaled in next two decades.

Written by a team of leading experts, it is the only book focusing on the broad areas of both the Internet of things and

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big data. The thirteen chapters present real-time experimental methods and theoretical explanations, as well as the implementation of these technologies through various applications. Offering a blend of theory and hands-on practices, the book enables graduate, postgraduate and research students who are involved in real-time project scaling techniques to understand projects and their execution. It is also useful for senior computer students, researchers and industry workers who are involved in experimenting with the Internet of Things and big data technologies, helping them to solve the real-time problem. Moreover, the chapters covering cutting-edge technologies help multidisciplinary researchers who are bridging the gap of two different outset real-time problems.

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This book gathers high-quality papers presented at the 5th International Conference on Intelligent Computing, Communication & Devices (ICCD 2019), held in Xi'an, China on November 22-24, 2019. The contributions focus on emergent fields of intelligent computing and the development of a new generation of intelligent systems. Further, they discuss virtually all dimensions of the intelligent sciences, including intelligent computing, intelligent communication and intelligent devices.

This book describes for readers various technical outcomes from the EU-project IoSense. The authors discuss sensor integration, including LEDs, dust sensors, LIDAR for automotive driving and 8 more, demonstrating their use in simulations

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for the design and fabrication of sensor systems. Readers will benefit from the coverage of topics such as sensor technologies for both discrete and integrated innovative sensor devices, suitable for high volume production, electrical, mechanical, security and software resources for integration of sensor system components into IoT systems and IoT-enabling systems, and IoT sensor system reliability. Describes from component to system level simulation, how to use the available simulation techniques for reaching a proper design with good performance; Explains how to use simulation techniques such as Finite Elements, Multi-body, Dynamic, stochastics and many more in the virtual design of sensor systems; Demonstrates the integration of several sensor solutions

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(thermal, dust, occupancy, distance, awareness and more) into large-scale system solutions in several industrial domains (Lighting, automotive, transport and more); Includes state-of-the-art simulation techniques, both multi-scale and multi-physics, for use in the electronic industry.

This multi-contributed handbook focuses on the latest workings of IoT (internet of Things) and Big Data. As the resources are limited, it's the endeavor of the authors to support and bring the information into one resource. The book is divided into 4 sections that covers IoT and technologies, the future of Big Data, algorithms, and case studies showing IoT and Big Data in various fields such as health care, manufacturing and automation. Features Focuses on the latest workings of IoT and Big Data

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Discusses the emerging role of technologies and the fast-growing market of Big Data
Covers the movement toward automation with hardware, software, and sensors, and trying to save on energy resources
Offers the latest technology on IoT
Presents the future horizons on Big Data

The book presents high-quality papers from the Third International Conference on Microelectronics, Computing & Communication Systems (MCCS 2018). It discusses the latest technological trends and advances in MEMS and nanoelectronics, wireless communications, optical communication, instrumentation, signal processing, image processing, bioengineering, green energy, hybrid vehicles, environmental science, weather forecasting, cloud computing,

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renewable energy, RFID, CMOS sensors, actuators, transducers, telemetry systems, embedded systems, and sensor network applications. It includes papers based on original theoretical, practical and experimental simulations, development, applications, measurements, and testing. The applications and solutions discussed in the book provide excellent reference material for future product development.

This book gathers a collection of high-quality, peer-reviewed research papers presented at the International Conference on Intelligent Computing, Communication and Devices (ICCD 2018), which address three core dimensions of the intelligent sciences—intelligent computing, intelligent communication, and

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Intelligent devices. Intelligent computing includes areas such as intelligent and distributed computing, intelligent grid and cloud computing, Internet of Things, soft computing and engineering applications, data mining and knowledge discovery, semantic and web technology, hybrid systems, agent computing, bioinformatics, and recommendation systems. In turn, intelligent communication is concerned with communication and network technologies, such as mobile broadband and all-optical networks, which are the key to groundbreaking advances in intelligent communication technologies. It includes communication hardware, software and networked intelligence, mobile technologies, machine-to-machine communication networks, speech and natural language processing, routing

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techniques and network analytics, wireless ad hoc and sensor networks, communications and information security, signal, image and video processing, network management, and traffic engineering. Lastly, intelligent devices refer to any equipment, instruments, or machines that have their own computing capability, and covers areas such as embedded systems, radiofrequency identification (RFID), radiofrequency microelectromechanical systems (RF MEMS), very large-scale integration (VLSI) design and electronic devices, analog and mixed-signal integrated circuit (IC) design and testing, microelectromechanical systems (MEMS) and microsystems, solar cells and photonics, nanodevices, single electron and spintronic devices, space electronics, and intelligent robotics.

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[From Concept to Solution](#)

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[Systems, Decision and Control in](#)

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[Applications of Artificial Intelligence](#)

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[Proceedings of ICCD 2017](#)

[Proceedings of ICICCD 2018](#)

[Concepts, Paradigms and Solutions](#)

[SIGMA 2018, Volume 1](#)

Arduino and Scilab based

Projects provides information

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ranging from the basics to advanced knowledge of Arduino and its interfacing with input/output devices (display devices, actuators, sensors), communication modules (RF modem, Zigbee) and Scilab. It also provides embedded system based on Arduino with simulation, programming and interfacing with Scilab, Arduino interfacing with Scilab with and without Arduino 1.1 packages. Chapters are arranged in an easy-to-understand sequence that enhances the learning experience for readers. Descriptions of real time project prototypes with

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programming and simulation of Arduino and Scilab.

This volume presents papers presented at CISIS 2019 and ICEUTE 2019, held in the beautiful and historic city of Seville (Spain) in May 2019.

The 12th CISIS 2019 conference offered a meeting opportunity for academic and industry-related researchers from the various communities of computational intelligence, information security and data mining, and the need for intelligent, flexible behaviour by large, complex systems, especially in mission-critical domains, was the catalyst and

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the aggregation stimulus for the event. The book covers current topics such as cryptographic and data analytics solutions to fulfil least minimum privilege and endorse least minimum effort in information systems. The book also includes 15 papers from the 10th ICEUTE 2019, covering topics like new approaches to assess competencies and innovation in computer science education. This book provides a single platform for beginners in systems engineering to start Arduino interface projects with MATLAB®. It covers the basics

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of the programming with Arduino and Arduino interfacing with MATLAB® (with and without the use of I/O packages) in 3 sections, respectively. Key features: -introduces readers to Arduino IDE, Proteus simulation modeling, Arduino interfaces with display devices, sensor interfaces (both digital and analog), actuators, MATLAB® GUIs, digital read/write systems with I/O interfaces and automation systems. -organized layout for a reader friendly experience -provides detailed circuit diagrams -provides relevant simulation modeling

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instructions This is an ideal book for engineering students and system designers for learning the basic programming and simulation of Arduino and MATLAB® based real time project prototypes.

This book presents the latest research in the fields of computational intelligence, ubiquitous computing models, communication intelligence, communication security, machine learning, informatics, mobile computing, cloud computing and big data analytics. The best selected papers, presented at the International Conference on

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Innovative Data Communication Technologies and Application (ICIDCA 2020), are included in the book. The book focuses on the theory, design, analysis, implementation and applications of distributed systems and networks.

This book offers a collection of high-quality, peer-reviewed research papers presented at the International Conference on Intelligent Computing, Communication and Devices (ICCD 2017), discussing all dimensions of intelligent sciences - intelligent computing, intelligent communication, and intelligent

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devices. Intelligent computing addresses areas such as intelligent and distributed computing, intelligent grid and cloud computing, internet of things, soft computing and engineering applications, data mining and knowledge discovery, semantic and web technology, hybrid systems, agent computing, bioinformatics, and recommendation systems. Intelligent communication is concerned with communication and network technologies, such as mobile broadband and all optical networks that are the key to groundbreaking

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inventions of intelligent communication technologies. It includes communication hardware, software and networked intelligence, mobile technologies, machine-to-machine communication networks, speech and natural language processing, routing techniques and network analytics, wireless ad hoc and sensor networks, communications and information security, signal, image and video processing, network management, and traffic engineering. Lastly, intelligent devices are any equipment, instruments, or

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machines that have their own computing capability. As computing technology becomes more advanced and less expensive, it can be incorporated an increasing number of devices of all kinds. This area covers such as embedded systems, radiofrequency identification (RFID), radiofrequency microelectromechanical system (RF MEMS), very-large-scale integration (VLSI) design and electronic devices, analog and mixed-signal integrated circuit (IC) design and testing, microelectromechanical system (MEMS) and microsystems,

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solar cells and photonics, nanodevices, single electron and spintronics devices, space electronics, and intelligent robotics.

Collecting and processing data is a necessary aspect of living in a technologically advanced society. Whether it's monitoring events, controlling different variables, or using decision-making applications, it is important to have a system that is both inexpensive and capable of coping with high amounts of data. As the application of these networks becomes more common, it becomes imperative to evaluate

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their effectiveness as well as other opportunities for possible implementation in the future. Sensor Technology: Concepts, Methodologies, Tools, and Applications is a vital reference source that brings together new ways to process and monitor data and to put it to work in everything from intelligent transportation systems to healthcare to multimedia applications. It also provides inclusive coverage on the processing and applications of wireless communication, sensor networks, and mobile computing. Highlighting a range of topics such as internet

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of things, signal processing hardware, and wireless sensor technologies, this multi-volume book is ideally designed for research and development engineers, IT specialists, developers, graduate students, academics, and researchers. The book presents high-quality research papers presented at the first international conference, ICICCD 2016, organised by the Department of Electronics, Instrumentation and Control Engineering of University of Petroleum and Energy Studies, Dehradun on 2nd and 3rd April, 2016. The book is broadly divided into

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three sections: Intelligent Communication, Intelligent Control and Intelligent Devices. The areas covered under these sections are wireless communication and radio technologies, optical communication, communication hardware evolution, machine-to-machine communication networks, routing techniques, network analytics, network applications and services, satellite and space communications, technologies for e-communication, wireless Ad-Hoc and sensor networks, communications and information security, signal

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processing for communications, communication software, microwave informatics, robotics and automation, optimization techniques and algorithms, intelligent transport, mechatronics system, guidance and navigation, algorithms, linear/non-linear control, home automation, sensors, smart cities, control systems, high performance computing, cognition control, adaptive control, distributed control, prediction models, hybrid control system, control applications, power system, manufacturing, agriculture cyber physical system, network

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control system, genetic control based, wearable devices, nano devices, MEMS, bio-inspired computing, embedded and real-time software, VLSI and embedded systems, FPGA, digital system and logic design, image and video processing, machine vision, medical imaging, and reconfigurable computing systems.

This book focuses on the latest emerging technologies in electric vehicles (EV), and their economic and environmental impact. The topics covered include different types of EV such as hybrid electrical vehicle (HEV), battery electrical vehicle

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(BEV), fuel cell electrical vehicle (FCEV), plug-in hybrid electrical vehicle (PHEV).

Theoretical background and practical examples of conventional electrical machines, advanced electrical machines, battery energy sources, on-board charging and off-board charging techniques, and optimization methods are presented here. This book can be useful for students, researchers and practitioners interested in different problems and challenges associated with electric vehicles.

[Advances in Smart Communication and Imaging](#)

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Systems

Cognitive Computing for
Human-Robot Interaction

Proceedings of the
International Conference on
Paradigms of Computing,
Communication and Data
Sciences

Select Proceedings of MedCom
2020

Modern Technologies and
Trends

Concepts, Techniques, and
Applications

Sensor Technology: Concepts,
Methodologies, Tools, and
Applications

Intelligent Methods in
Computing, Communications

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[The Internet of Things in the
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[Proceedings of ICICCD 2020
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This book examines the problems in the field of energy and related areas (including chemistry, transport, aerospace, construction, metallurgy and engineering) that Ukrainian scientists are currently investigating. The research presented focuses on

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ensuring the operational reliability, durability and safety of energy equipment, as well as the development of control, diagnostics and monitoring systems in the energy sector. Further, the book explores the ecological consequences of energy facilities , particularly environmental pollution in large cities and industrial areas. Written mainly by representatives of the Council of Young Scientists of the Department of Physical and Technical Problems of Energy at the NAS of Ukraine, it is intended for researchers and engineers, as well as lecturers and postgraduates

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at higher education institutions interested in the control, diagnosis and monitoring of energy facilities.

The book discusses the recent research trends in various sub-domains of computing, communication and control. It includes research papers presented at the First International Conference on Emerging Trends in Engineering and Science. Focusing on areas such as optimization techniques, game theory, supply chain, green computing, 5g networks, Internet of Things, social networks, power electronics and robotics, it is a useful

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resource for academics and researchers alike.

The book focuses on the integration of intelligent communication systems, control systems, and devices related to all aspects of engineering and sciences. It includes high-quality research papers from the 3rd international conference, ICICCD 2018, organized by the Department of Electronics, Instrumentation and Control Engineering at the University of Petroleum and Energy Studies, Dehradun on 21–22 December 2018. Covering a range of recent advances in intelligent communication, intelligent control and intelligent

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devices., the book presents original research and findings as well as researchers' and industrial practitioners' practical development experiences of. This book addresses the Internet of Things (IoT), an essential topic in the technology industry, policy, and engineering circles, and one that has become headline news in both the specialty press and the popular media. The book focuses on energy efficiency concerns in IoT and the requirements related to Industry 4.0. It is the first-ever "how-to" guide on frequently overlooked practical, methodological, and moral questions in any

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nations' journey to reducing energy consumption in IoT devices. The book discusses several examples of energy-efficient IoT, ranging from simple devices like indoor temperature sensors, to more complex sensors (e.g. electrical power measuring devices), actuators (e.g. HVAC room controllers, motors) and devices (e.g. industrial circuit-breakers, PLC for home, building or industrial automation). It provides a detailed approach to conserving energy in IoT devices, and comparative case studies on performance evaluation metrics, state-of-the-art approaches, and IoT legislation.

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