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Sensor Technology for Smart Homes Juan Ye 2021-04-21 This Special Issue presents the recent advances in sensor technologies for smart homes, including fiber Bragg grating (FBG) sensors for detecting the presence and number of occupants, the Internet of things for monitoring CO2 concentration, and designing a novel eye-tracking system for monitoring and controlling a smart home, and infrared thermal sensors for fall detection. Such new explorations are pushing the boundary of sensing technologies and, thus, will have more profound implications for the future smart home. Advanced machine learning and data mining algorithms have been proposed to address sensor failure, appliance identification, and human activity recognition in a home environment. These results will enable a promising, sustainable deployment of sensing technologies. A novel multi-agent gamification system is proposed for managing tasks between household members and between families, which demonstrate another dimension of future smart home application. This Special Issue concludes with a review on sensors for human activity recognition. This work paves the roadmap for deploying smart home systems in different socioeconomic contexts. The whole Special Issue has significantly helped to shape our understanding of the strength, implications, and barriers of deploying long-term, sustainable, sensor technologies for smart homes.

ICICKM2015-12th International Conference on Intellectual Capital Knowledge Management & Organisational Learning Vincent Ribière and Lugkana Worasinchai 2015-10-20

Eco-Homes Doctor Jenny Pickerill 2016-01-15 It is widely understood that good, affordable eco-housing needs to be at the heart of any attempt to mitigate or adapt to climate change. This is the first book to comprehensively explore eco-housing from a geographical, social and political perspective. It starts from the premise that we already know how to build good eco-houses and we already have the technology to retrofit existing housing. Despite this, relatively few eco-houses are being built. Featuring over thirty case studies of eco-housing in Britain, Spain, Thailand, Argentina and the United States, Eco-Homes examines the ways in which radical changes to our houses – such as making them more temporary, using natural materials, or relying on manual heating and ventilation systems – require changes in how we live. As such, it argues, it is not lack of technology or political will that is holding us back from responding to climate change, but deep-rooted cultural and social understandings of our way of life and what we expect our houses to do for us.

The Handbook of Informal Language Learning Mark Dressman 2020-02-03 Provides a comprehensive and unique examination of global language learning outside of the formal school setting Authored by a prominent team of international experts in their respective fields, The Handbook of Informal Language Learning is a one-of-a-kind reference work and it is a timely and valuable resource for anyone looking to explore informal language learning outside of a formal education environment. It features a comprehensive collection of cutting edge research areas exploring the cultural and historical cases of informal language learning, along with the growing area of digital language learning, and the future of this relevant field in national development and language education. The Handbook of Informal Language Learning examines informal language learning from both theoretical and practical perspectives. Structured across six sections, chapters cover areas of motivation, linguistics, cognition, and multimodality; digital learning, including virtual contexts, gaming, fanfiction, vlogging, mobile devices, and nonformal programs; and media and live contact, including learning through environmental print, tourism/study abroad. The book also provides studies of informal learning in four national contexts, examines the integration of informal and formal classroom learning, and discusses the future of language learning from different perspectives. Edited by respected researchers of computer-mediated communication and second language learning and teacher education Features contributions by leading international scholars reaching out to a global audience Presents an exciting and progressive selection of chapters in a rapidly expanding field of research and teaching Provides a state-of-the-art collection of the theories, as well as the historical, cultural and international cases relating to informal language learning and its future in a digital age Covers 30 key topics that represent pioneering findings and new research The Handbook of Informal Language Learning is an essential resource for researchers, students, and professionals in the fields of language acquisition, English as a second language, and foreign language education.

Encyclopedia of Information Science and Technology, Third Edition Khosrow-Pour, Mehdi 2014-07-31 "This 10-volume compilation of authoritative, research-based articles contributed by thousands of researchers and experts from all over the world emphasized modern issues and the presentation of potential opportunities, prospective solutions, and future directions in the field of information science and technology"--Provided by publisher.

Enterprise Architecture for Connected E-Government: Practices and Innovations Saha, Pallab 2012-06-30 "This book addresses the gap in current literature in terms of linking and understanding the relationship between e-government and government enterprise architecture"--Provided by publisher.

Computer Applications for Communication, Networking, and Digital Contents Tai-hoon Kim 2012-11-28 This volume constitutes the refereed proceedings of the International Conferences, FGCN and DCA 2012, held as part of the Future Generation Information Technology Conference, FGIT 2012, Kangwondo, Korea, in December 2012. The papers presented were carefully reviewed and selected from numerous submissions and focus on the various aspects of future generation communication and networking, and digital contents and applications.

Towards Energy Smart Homes Stephane Ploix 2021-11-11 This book exemplifies how smart buildings have a crucial role to play for the future of energy. The book investigates what already exists in regards to technologies, approaches and solutions both with a scientific and technological point of view. The authors cover solutions for mirroring and tracing human activities, optimal strategies to configure home settings, and generating explanations and persuasive dashboards to get occupants better committed in their home energy managements. Solutions are adapted from the fields of Internet of Things, physical modeling, optimization, machine learning and applied artificial intelligence. Practical applications are given throughout.

The Home of the Future Sinan Küfeoğlu 2021-07-01 This book presents an in-depth study to show that a sustainable future urban life is possible. To build a safer and more sustainable future, as humankind, we would like to use more renewable energy, increase energy efficiency, reduce our carbon and water footprints in all economic sectors. The increasing population and humans' ever-increasing demand for consumption pose another question whether the world's resources are sufficient for present and future generations. Fair access to water, energy, and food is the objective for all. In line with the United Nations Sustainable Development Goals, scientists, researchers, engineers, and policymakers worldwide are working hard to achieve these objectives. To answer all these challenges, we would like to introduce the core of Smart Cities of the future, the building block of the future's urban life: Open Digital Innovation Hub (ODIH). ODIH will serve as the 'Home of the Future', a fully digitalised and smart, self-sustaining building that answers all the motivation we highlight here. In ODIH, we introduce a living space that produces its water, energy, and food by minimising carbon and water footprints thanks to the Internet of Things, Artificial Intelligence, and Blockchain technologies. It will also serve as an open innovation environment for start-ups and entrepreneurs who wish to integrate their solutions into the infrastructure of ODIH and test those in real-time. We believe this will be a true open innovation test-bed for new business models.

Robot Intelligence Technology and Applications 5 Jong-Hwan Kim 2018-05-31 This book includes papers from the 5th International Conference on Robot Intelligence Technology and Applications held at KAIST, Daejeon, Korea on December 13-15, 2017. It covers the following areas: artificial intelligence, autonomous robot navigation, intelligent robot system design, intelligent sensing and control, and machine vision. The topics included in this book are deep learning, deep neural networks, image understanding, natural language processing, speech/voice/text recognition, reasoning & inference, sensor integration/fusion/perception, multisensor data fusion, navigation/SLAM/localization, distributed intelligent algorithms and techniques, ubiquitous computing, digital creatures, intelligent agents, computer vision, virtual/augmented reality, surveillance, pattern recognition, gesture recognition, fingerprint recognition, animation and virtual characters, and emerging applications. This book is a valuable resource for robotics scientists, computer scientists, artificial intelligence researchers and professionals in universities, research institutes and laboratories.

Financial Services and General Government Appropriations for 2013 United States. Congress. House. Committee on Appropriations. Subcommittee on Financial Services and General Government 2012

Handbook of Research on Adapting Remote Learning Practices for Early Childhood and Elementary School Classrooms Courtney-Dattola, Ashley 2021-12-17 Teaching is a demanding profession as there is constant fluctuation and evolution. A portion of teaching is the ability to be able to adapt to various environments, especially shifting from in-person instruction to online practices. Over the last few years, early childhood and elementary school classrooms have been thrust into hybrid and remote learning environments, and it is vital that educators and institutions adapt to new practices and create various outlets for teachers to be able to more adequately reach their young audience. The Handbook of Research on Adapting Remote Learning Practices for Early Childhood and Elementary School Classrooms is a critical resource to assist teachers as they develop online teaching practices and work to cater to young students so that they can receive the strongest benefits from their education. Through coverage of topics such as hybrid learning and parental involvement, paired with sample lesson plans, course formats, concepts, ideas, and additional components to further the body of research pertaining to remote learning, this book is tremendously beneficial to administrators, researchers, academicians, practitioners, instructors, and students.

The Great American Education-Industrial Complex Anthony G. Picciano 2013-05-07 The Great American Education-Industrial Complex examines the structure and nature of national networks and enterprises that seek to influence public education policy in accord with their own goals and objectives. In the past twenty years, significant changes have taken place in the way various interest groups seek to influence policies and practices in public education in the United States. No longer left to the experience and knowledge of educators, American education has become as much the domain of private organizations, corporate entities, and political agents who see it as a market for their ideas, technologies, and ultimately profits. Picciano and Spring posit that educational technology is the vehicle whereby these separate movements, organizations, and individuals have become integrated in a powerful common entity, and detail how the educational-industrial complex has grown and strengthened its position of influence. This timely, carefully documented, well argued book brings together Picciano's perspective and expertise in the field of technology and policy issues and Spring's in the history and politics of education in a unique critical analysis of the education-industrial complex and its implications for the future.

ECKM 2020 21st European Conference on Knowledge Management Professor Alexis Garcia-Perez 2020-12-02

ECIC2011-Proceedings of the 3rd European Conference on on Intellectual Capital Geoff Turner 2011-04-18 These proceedings represent the work of presenters at the 3rd European Conference on Intellectual Capital (ECIC 2011). The Conference is hosted this year by the University of Nicosia in Cyprus. The Conference Chair is Geoff Turner from the University of Nicosia and the Programme Chair is Clemente Minonne from the School of Management and Law, Zurich University of Applied Sciences, Winterthur, Switzerland. The opening keynote address is given by John Girard from Minot State University in the USA. John will address the question Social Knowledge: Are we ready for the future? The second day of the conference will be opened by Ludo Pysis from AREOPA in Belgium who will consider Intellectual Capital Accounting: how to measure the unmeasurable. We also look forward to a Knowledge Cafe on the topic of What intellectual capital ideas and developments do you expect to live and see? facilitated by Helen Paige from The Paige Group, South Australia.

ECEI2011- 6th European Conference on Innovation and Entrepreneurship Heather Fulford 2011-09-15

Towards Useful Services for Elderly and People with Disabilities Bessam Abdulrazak 2011-06-17 This book constitutes the refereed proceedings of the 9th International Conference on Smart Homes and Health Telematics, ICOST 2011, held in Montreal, Canada, in June 2011. The 25 revised full papers presented together with 16 short papers and 8 student papers were carefully reviewed and selected from 94 submissions. The papers are organized in topical sections on smart home and village; health telematics and healthcare technology; wellbeing, ageing friendly and enabling technology; and medical health telematics and healthcare technology.

ECEL2013- Proceedings of the 12th European Conference on eLearning Dr Mélanie Ciussi 2013-01-09

Biometric-Based Physical and Cybersecurity Systems Mohammad S. Obaidat 2018-10-24 This book presents the latest developments in biometrics technologies and reports on new approaches, methods, findings, and technologies developed or being developed by the research community and the industry. The book focuses on introducing fundamental principles and concepts of key enabling technologies for biometric systems applied for both physical and cyber security. The authors disseminate recent research and developing efforts in this area, investigate related trends and challenges, and present case studies and examples such as fingerprint, face, iris, retina, keystroke dynamics, and voice applications. The authors also investigate the advances and future outcomes in research and development in biometric security systems. The book is applicable to students, instructors, researchers, industry practitioners, and related government agencies staff. Each chapter is accompanied by a set of PowerPoint slides for use by instructors.

Building the e-World Ecosystem Tomas Skersys 2011-12-03 This book constitutes the thoroughly refereed post-conference proceedings of the 11th IFIP WG 6.11 Conference on e-Business, e-Services and e-Society, I3E 2011, held in Kaunas, Lithuania, in October 2011. The 25 revised papers presented were carefully reviewed and selected from numerous submissions. They are organized in the following topical sections: e-government and e-governance, e-services, digital goods and products, e-business process modeling and re-engineering, innovative e-business models and implementation, e-health and e-education, and innovative e-business models.

Smart Homes Nagender Kumar Suryadevara 2015-01-02 The book addresses issues towards the design and development of Wireless Sensor Network based Smart Home and fusion of Real-Time Data for Wellness Determination of an elderly person living alone in a Smart Home. The fundamentals of selection of sensor, fusion of sensor data, system design, modelling, characterizations, experimental investigations and analyses have been covered. This book will be extremely useful for the engineers and researchers especially higher undergraduate, postgraduate students as well as practitioners working on the development of Wireless Sensor Networks, Internet of Things and Data Mining.

Information Literacy: Lifelong Learning and Digital Citizenship in the 21st Century Serap Kurbanoğlu 2014-12-13 This book constitutes the refereed proceedings of the European Conference on Information Literacy, ECIL 2014, held in Dubrovnik, Croatia, in October 2014. The 93

revised full papers presented together with two keynotes and one invited paper were carefully reviewed and selected from 283 submissions. The papers are organized in topical sections on theoretical framework; related concepts; research; rights and ethics; children; higher education; education and instruction; assessment and evaluation; libraries; different aspects.

Security and Privacy Applications for Smart City Development Sharvari Chandrashekar Tamane 2020-10-01 This book explores the fundamentals of smart cities along with issues, controversies, problems and applications concerning security and privacy in smart city development. Future smart cities must incorporate innovations like smart rainwater harvesting, smart street lighting, digital identity management, solar energy, intelligent transport systems and emerging communication applications. The target audience of the book includes professionals, researchers, academics, advanced-level students, technology developers, doctors and biologists working in the field of smart city applications. Professionals will find innovative ideas for marketing and research, while developers can use various technologies like IoT and block chain to develop the applications discussed here. As the book shows, by integrating new technologies, the cities of the future are becoming a reality today.

Missing Persons Karen Shalev Greene 2016-10-14 A missing person is an individual whose whereabouts are unknown and where there is some concern for his or her wellbeing. In the UK, around 250,000 people are reported missing every year, with the majority being children under the age of 18. Despite the fact that missing persons are a social phenomenon which encompasses vast areas of interest, relatively little is known about those who go missing, what happens to them while they are missing, and what can be done to prevent these incidents from occurring. This groundbreaking book brings together for the first time ideas and expertise across this vast subject area into one interconnected publication. It explores the subjects of missing children, missing adults, the investigative process of missing person cases, and the families of missing persons. Those with no prior knowledge or professionals with focused knowledge in some areas will be able to expand their understanding of a variety of topics relevant to this field through detailed chapters which advance our understanding of this complex phenomenon, discuss what is unknown, and suggest the best and most important steps forward to further advance our knowledge.

ICICKM2011-Proceedings of the 8th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning

Vincent Ribiere 2011

Design and Construction of High-Performance Homes Franca Trubiano 2013-03-05 Both professionals and students are increasingly committed to achieving high-performance metrics in the design, construction and operation of residential buildings. This book responds to this demand by offering a comprehensive guide which features: architectural innovations in building skin technologies which make lighter more transparent buildings high performing; energy-free architectural design principles and advances in building-integrated photovoltaics; essential engineering principles, controls and approaches to simulation for achieving net zero; the advantages of integrated design in residential construction and the challenges and opportunities it engenders; detailed case studies of innovative homes which have incorporated low-energy design solutions, new materials, alternative building assemblies, digital fabrication, integrated engineering systems and operational controls. Divided into four parts, the book discusses the requisite AEC (Architecture, Engineering and Construction) knowledge needed when building a high-performance home. It also communicates this information across four case studies, which provide the reader with a thorough overview of all aspects to be considered in the design and construction of sustainable homes. With contributions from experts in the field, the book provides a well-rounded and multi-faceted approach. This book is essential reading for students and professionals in design, architecture, engineering (civil, mechanical and electrical), construction and energy management.

ECEG2011-Proceedings of the 11th European Conference on EGovernment Maja Klun 2011-01-01

Smart Health Andreas Holzinger 2015-02-24 Prolonged life expectancy along with the increasing complexity of medicine and health services raises health costs worldwide dramatically. Whilst the smart health concept has much potential to support the concept of the emerging P4-medicine (preventive, participatory, predictive, and personalized), such high-tech medicine produces large amounts of high-dimensional, weakly-structured data sets and massive amounts of unstructured information. All these technological approaches along with "big data" are turning the medical sciences into a data-intensive science. To keep pace with the growing amounts of complex data, smart hospital approaches are a commandment of the future, necessitating context aware computing along with advanced interaction paradigms in new physical-digital ecosystems. The very successful synergistic combination of methodologies and approaches from Human-Computer Interaction (HCI) and Knowledge Discovery and Data Mining (KDD) offers ideal conditions for the vision to support human intelligence with machine learning. The papers selected for this volume focus on hot topics in smart health; they discuss open problems and future challenges in order to provide a research agenda to stimulate further research and progress.

Educational Practices in China, Korea, and the United States Chuang Wang 2020-03-01 This book is written by a diverse cohort of both of American educators, including professors, teachers, school counselors, and school administrators from pre-K to college levels. Most of the contributors come from disciplinary areas of English as a second language and school administration. With the pressure of Common Core State Standards Initiative, American educators are now shifting their focus to standards-based instruction. Meanwhile, Chinese educators are moving away from national standards and developing state level curriculum and instruction to meet specific needs of the students in local provinces. There is also a debate about whether or not to use the National College Entrance Examination as the only test for college admission. Some provinces (e.g., Zhejiang and Hubei) are administering their own college entrance examinations. The book outlines the socio-cultural roots of education in the three countries, linking the tradition and philosophical orientations to each country's own history of education. Furthermore, the book compares and contrasts the curriculum, especially the teaching of English as a second/foreign language, in three countries. This book examines the stress of students, physical education, various pedagogical styles in foreign language education as well as instructional texts and cross-cultural dialogue between teachers. Additionally, the book explores factors that influence parent's involvement and women's educational and career aspirations. Lastly, the book presents modern technologies such as smart learning technologies and online learning platforms not only to facilitate future educational systems but also to promote international exchanges. The chapters of the book are thematically diverse, but they help to provide inspirations for educators both in American and Asian countries. The findings offer alternative practical lenses for educational community to seek for some "middle ground" between Chinese, South Korea and American education. The intended audience for this book is graduate students, teachers, administrators, and professionals in education.

ECIE2011- 6th European Conference on Innovation and Entrepreneurship Alexandros Kakouris 2011

Design and Application of Quantified Self Approaches for Reflective Learning in the Workplace Rivera Pelayo, Verónica 2015-09-16

ECEL2012-The Proceedings of the 11th European Conference on E-Learning Hans Belldhuis 2012

Congressional Record United States. Congress 2009 The Congressional Record is the official record of the proceedings and debates of the United States Congress. It is published daily when Congress is in session. The Congressional Record began publication in 1873. Debates for sessions prior to 1873 are recorded in The Debates and Proceedings in the Congress of the United States (1789-1824), the Register of Debates in Congress (1824-1837), and the Congressional Globe (1833-1873)

Mobile and Blended Learning Innovations for Improved Learning Outcomes Parsons, David 2016-05-03 The integration of technology into educational settings has revolutionized classroom instruction in recent years. By properly utilizing available digital resources, students' learning experiences can be significantly enhanced. Mobile and Blended Learning Innovations for Improved Learning Outcomes is an authoritative reference source for the latest research on the use and benefits of technological tools in contemporary classrooms and showcases how these devices improve the overall learning process. Highlighting the distinctions and interactions between mobile and blended education, this book is ideally designed for practitioners, professionals, academicians, and students interested in the effective implementation of modern technology in the classroom.

Formative Assessment, Learning Data Analytics and Gamification Santi Caballé 2016-05-10 Formative Assessment, Learning Data Analytics and Gamification: An ICT Education discusses the challenges associated with assessing student progress given the explosion of e-learning environments, such as MOOCs and online courses that incorporate activities such as design and modeling. This book shows educators how to effectively garner intelligent data from online educational environments that combine assessment and gamification. This data, when used effectively, can have a positive impact on learning environments and be used for building learner profiles, community building, and as a tactic to create a collaborative team. Using numerous illustrative examples and theoretical and practical results, leading international experts discuss application of automatic techniques for e-assessment of learning activities, methods to collect, analyze, and correctly visualize learning data in educational environments, applications, benefits and challenges of using gamification techniques in academic contexts, and solutions and strategies for increasing student participation and performance. Indexing: The books of this series are submitted to EI-Compendex and SCOPUS Discusses application of automatic techniques for e-assessment of learning activities Presents strategies to provide immediate and useful feedback on students' activities Provides methods to collect, analyze, and correctly visualize learning data in educational environments Explains the applications, benefits, and challenges of using gamification techniques in academic contexts Offers solutions to increase students' participation and performance while lowering drop-out rates and retention levels

Machine Learning for Computer and Cyber Security Brij B. Gupta 2019-02-05 While Computer Security is a broader term which incorporates technologies, protocols, standards and policies to ensure the security of the computing systems including the computer hardware, software and the information stored in it, Cyber Security is a specific, growing field to protect computer networks (offline and online) from unauthorized access, botnets, phishing scams, etc. Machine learning is a branch of Computer Science which enables computing machines to adopt new behaviors on the basis of observable and verifiable data and information. It can be applied to ensure the security of the computers and the information by detecting anomalies using data mining and other such techniques. This book will be an invaluable resource to understand the importance of machine learning and data mining in establishing computer and cyber security. It emphasizes important security aspects associated with computer and cyber security along with the analysis of machine learning and data mining based solutions. The book also highlights the future research domains in which these solutions can be applied. Furthermore, it caters to the needs of IT professionals, researchers, faculty members, scientists, graduate students, research scholars and software developers who seek to carry out research and develop combating solutions in the area of cyber security using machine learning based approaches. It is an extensive source of information for the readers belonging to the field of Computer Science and Engineering, and Cyber Security professionals. Key Features: This book contains examples and illustrations to demonstrate the principles, algorithms, challenges and applications of machine learning and data mining for computer and cyber security. It showcases important security aspects and current trends in the field. It provides an insight of the future research directions in the field. Contents of this book help to prepare the students for exercising better defense in terms of understanding the motivation of the attackers and how to deal with and mitigate the situation using machine learning based approaches in better manner.

Shaping the University of the Future Stephen James Marshall 2018-01-02 This book focuses on developing an understanding of the complex interplay of forces acting on individual universities and higher education systems to enable leaders and practitioners to take purposeful and strategic action. It explores the challenging landscape of higher education and the pressures that are reshaping the university as a societal institution, describing the complex interplay of technological, sociological, political and economic forces driving change. The issues analysed are global in scope, reflecting the diversity of contexts, but also the common nature of the challenges facing institutions individually and collectively. The analysis draws on the lessons learnt and evidence from over fifty organisational case studies undertaken by the author over the past decade, exploring organisational change in higher education institutions in New Zealand, Australia, the United States and the United Kingdom, and on his engagement as president of the ACODE organisation with colleagues responsible for learning technological change in Australasia. The book helps institutions respond to technological change purposefully, in ways that build upon a clear understanding of the complex nature of the existing institution, its students and the organisational context.

Development, Social Change and Environmental Sustainability Sumarmi 2021-06-17 Nowadays, the concept of SDGs (Sustainable Development Goals) is starting to replace the concept of MDGs (Millennium Developmental Goals). It is a global goal adopted by all United Nations member states. It emphasizes the idea that the development of every country can only be achieved by balancing other factors such as social, economic, and environmental sustainability. It is already clear how sustainable development works with environmental ethics and management. However, there are still issues regarding the sustainable development and human well-being. Sustainable development should focus on finding a way for society to meet their present needs for the long term without sacrificing the ability of future generations to meet their needs. This international seminar provides research results and literature regarding the topic of sustainable development concept, the dynamics of sustainable development and social change, and environmental sustainability. The international seminar, entitled 1st International Conference on Contemporary Sociology and Educational Transformation, listed speakers from several countries providing an overview on human and environmental resilience. This book contains a selection of papers presented at the conference.

Games and Learning Alliance Manuel Gentile 2019-01-31 This book constitutes the refereed proceedings of the 7th International Conference on Games and Learning Alliance, GALA 2018, held in Palermo, Italy, in December 2018. The 38 revised regular papers presented together with 9 poster papers were carefully reviewed and selected from 68 submissions. The papers cover the following topics: games for skills training; game design; methods and tools; gamification and innovative game approaches.

Operation of Smart Homes Mehdi Rahmani-Andebili 2021-06-15 This book presents the latest research advancements in the operation of smart homes. It comprises new operation techniques including cooperative distributed energy scheduling, framework to react to malicious cyberattacks, framework for demand-side management, and framework for the design of smart homes to support residents' wellness as well as new optimization techniques such as stochastic model predictive control and multi-time scale optimization. In addition, the book analyzes 11,000 studies that have been indexed in scientific databases and categorizes them based on various data points, including the field and the subject of the research, the name of the institutions, and the nationality of the authors. Presents new operation techniques of smart homes; Introduces new optimization techniques for operation of smart homes; Analyses 11,000 studies and categorizes them based on different data points.