

## Sustainable Design A Critical Guide David Bergman

This book provides a comprehensive, hands-on approach to bioclimatic building design in Africa. Bioclimatic design is at the core of urban sustainability, and is a critical issue in Africa, where “imported” building typologies are being used at an increasing pace, disregarding the local context and consequently causing damage to the environment, to the economy, and to the culture itself. This book provides a concise set of sustainable design guidelines to be applied in both new buildings and the refurbishment of old buildings, and integrates bioclimatic design strategies with other sustainability issues such as: cultural aspects, affordability, and urban planning. Chapters are fully illustrated with photographs and drawings and include best-practice examples and strategies making it accessible to engineers, architects, students and a broad range of professionals in the building industry. Encompasses all climatic regions in Africa; Integrates bioclimatic design strategies with other sustainability issues; Discusses new design to refurbishment, from urban to rural, including office buildings, residential, tourism, social housing and self building.

This proceedings book presents contributions to the International Conference on Critical Thinking in the Sustainable Rehabilitation and Risk Management of the Built Environment – CRIT-RE-BUILT – held in Iași, Romania, November 7–9, 2019. It mirrors outcomes in fundamental and applied research covering a broad palette of competences like observations, analysis, interpretation, evaluation, problem-solving and decision making. The book sets up eight chapters related to rehabilitation and risk in the built environment. Each chapter starts with a broad state-of-the-art presentation comprising the latest ideas and methods in the field assessing and asserting synthesized levels of research, development and novelty through a critical thinking process. The authors of the eight presentations are partners in the E+ Programme for Strategic Partnerships Rehabilitation of the Built Environment in the Context of Smart City and Sustainable Development Concepts for Knowledge Transfer and Lifelong Learning (RE-BUILT).

A real-world DESIGN tool for sustainable design In this comprehensive guide, the world's largest architectural/engineering design firm helps architects, engineers, planners, interior designers, and landscape architects integrate sustainable design strategies into their work. Featuring twenty-four case studies of a variety of international HOK projects, it shows how, far from being an all-or-nothing proposition, sustainable design thinking can improve projects within the conventional constraints of budget, schedule, and market demand. It provides practical guidelines that enhance real projects, including urban planning, site design, buildings, interiors, and renovations. This book: \* Demonstrates how real, completed, sustainable design projects are economically viable and increase client satisfaction \* Provides a clear road map for the integrated multidisciplinary design process that is critical to the successful development of sustainable design projects \* Captures the key principles of sustainable design in a list of "Ten Simple Things You Can Do" \* Provides concise checklists of issues to consider at each stage of the design process, followed by detailed how-to guidance \* Contains a detailed glossary of terms and a list of top print and Internet resources \* Covers issues and design strategies related to site planning and design, energy and water conservation, materials selection and specification, and interior environmental quality

"While most books related to BIM are focused on large-scale architectural projects, this is the only book focused on BIM strategies for modest-scaled architectural projects that are sustainably designed. Specific in its examples and methods, the book serves as practical guide for architects and is intended to be a desktop companion. Other books, other than software guides, tend to treat BIM or sustainable practices separately in a high-level discussion"-- Cities for Smart Environmental and Energy Futures presents works written by eminent international experts from a variety of disciplines including architecture, engineering and

related fields. Due to the ever-increasing focus on sustainable technologies, alternative energy sources, and global social and urban issues, interest in the energy systems for cities of the future has grown in a wealth of disciplines. Some of the special features of this book include new findings on the city of the future from the macro to the micro level. These range from urban sustainability to indoor urbanism, and from strategies for cities and global climate change to material properties. The book is intended for graduate students and researchers active in architecture, engineering, the social and computational sciences, building physics and related fields.

The must-have reference on construction product representation—and the essential study aid for the Certified Construction Product Representative (CCPR) Exam The CSI Practice Guides are a library of comprehensive references specifically and carefully designed for the construction professional. Each book examines important concepts and best practices integral to a particular aspect of the building process. The CSI Construction Product Representation Practice Guide is an authoritative resource for the principles and best practices of effective construction product representation. This easy-to-follow guide includes: Coverage of the construction process and the roles the construction product representative can play in it Information that clients require to select appropriate products to meet project requirements Knowledge, preparation, and use of construction documents The role the product representative plays in an Integrated Product Delivery (IPD) workflow Access to a password-protected website with bonus content, including a PDF of the printed book and copies of CSI format documents, such as UniFormat™ and SectionFormat™/PageFormat™ The CSI Construction Product Representation Practice Guide is an essential resource for building product manufacturers, sales representatives, and related professionals and a valuable study aid to help prepare for the Certified Construction Product Representative (CCPR) Exam.

"Written by two national leaders in sustainable design, a principal at Perkins + Will and a former chair of the board of USGBC, this is the key guide to designing sustainable health care facilities. Fully updated with the latest sustainable design information, new project case studies, and performance metrics LEED for Healthcare (new in 2011) and the online Green Guide for Health Care, the book covers hospitals, ambulatory care, wellness centers, subacute care, and rehabilitation centers. It also includes a number of new guest contributor essays on sustainable design topics specific to healthcare facilities"--

Written for architects and the design and construction team, this is a comprehensive guide to an integrated design process to create more sustainable buildings. The book is organized in a sequence similar to that employed by conventional design, so that it can be utilized as a real-world guide. Learning how to shift into the mindset essential to implementing integrated design, readers will explore into such processes as systems thinking, appreciative inquiry, non-hierarchical leadership, holistic mapping, and linear versus integrated architectural design progression. Multiple case studies are incorporated to provide concrete examples of successful integrated design implementation.

The first devoted overview to the field, The Handbook of Design for Sustainability is the authoritative text on sustainable design.

The Second Edition of Sustainable Residential Interiors addresses cutting edge processes, strategies, and principles as well as details for in-depth product vetting criteria. Award-winning, leading interior designer Annette Stelmack shares her expertise from the perspective of LEED Building Design & Construction projects, healthy interiors, and chemical sensitivities, addressing principles, strategies, and solutions for design practitioners. A comprehensive update of the current state of the sustainable interior design industry is provided, including present and upcoming industry transformations, thought-leading principles, strategies and practices for project implementation, and fine points and resources for in-depth product vetting to support high-performing, healthy interiors. Sustainable Residential Interiors takes readers

through an integrated design process, demonstrating relevant principles and practices that apply to essentially any interiors project toward creating an environment that is healthy, high-performing, functional, sustainable, and beautiful. In doing so, it: Promotes critical thinking about health and environmental issues in the building industry Features checklists and current resources, providing a "hands on" practical approach Addresses in-depth, applicable third party certifications and details on relevant building rating systems Provides in-depth strategies and criteria for fixed interior finishes, fixtures, equipment and furnishings Demonstrates successful, relevant, diverse and inspiring case studies Delivers comprehensive tools and resources for researching and vetting products' composition and chemical make-up. Evaluates all aspects of a building's interior to identify and implement methods that: save energy and water; reduce Co2 emissions and waste; improve indoor air quality free of toxins; and are responsive to environmental impacts Encourages forward-thinking by featuring inspirational statements from mentors, peers, and industry leaders Urges interior designers to commit to designing safe, healthy environments that are integral to a professional code of ethics, which ensure the delivery of positive outcomes for the client and any building's future occupants A pioneering 'How To' guide on the practical implementation of sustainable construction techniques.

Today's homes must prepare for a progressing ageing population and an increasing risk caused by climate change, as well as to reduce CO2 emissions. How homes can be designed to meet all of these requirements? How such design can be promoted in the housing market? Sustainable Home Design by Applying Control Science answers these questions, by using a novel approach. Kazutoshi Fujihira, an innovative environmental scientist and sustainable housing award winner, demonstrates the "control system for promoting sustainable home design" with the "sustainable design guidelines" and "sustainability checklist". Moreover, the chapter of case study illustrates an actually designed and constructed house, which shows excellent sustainability and energy-saving performance.

Green design is the major architectural movement of our time. Throughout the world architects are producing sustainable buildings in an attempt to preserve the environment and our globe's natural resources. However, current strategies for forming sustainable solutions are typically too general and fail to take advantage of critical geographical, environmental, and cultural factors particular to a specific place. By focusing on the Pacific Northwest, this book provides essential lessons to architects and students on how sustainable architecture can and should be shaped by the unique conditions of a region. Pacific Northwest regionalism has consistently supported an architecture aimed at environmental needs and priorities. This book illuminates the history of a "green trail" in the work of key architects of the Northwest. It discusses environmental strategies that work in the region, organized according to nature's most basic elements--earth, air, water, and fire--and their underlying principles and forces. The book focuses on technologies, materials, and methods, with a final section that examines thirteen exceptional Northwest buildings in detail and in light of their contributions to sustainable architecture. Critical case studies by Northwest architects illustrate some of the best environmental design work in North America. Notable architects from Seattle, Portland, and British Columbia are included. These projects feature innovative design in water and site stewardship, intelligent technologies, passive energy strategies, ecologically sound building materials, and environmentally sensitive energy management systems.

The graphic artist's guide to sustainable design Graphic design is frequently thought of as a purely decorative effort. Yet these efforts can be responsible for shocking impacts on natural resources just to produce a barely-glanced-at catalog or mail piece. Sustainable Graphic Design: Tools, Systems, and Strategies for Innovative Print Design helps designers view graphic design as a holistic process. By exploring eco-conscious materials and production techniques, it shows designers how to create more effective and more sustainable designs.



international and national sustainable design practices so as to introduce, promote and guide realistic, practicable, and case-specific sustainable architectural solutions. The specific focus in both the critical evaluation of extant sustainable practices abroad and the proposed process for the municipality of Seyrek in Menemen, Izmir, Turkey, is the distinction between the assets and needs of industrialized northern geographies and southern geographies which are in the process of industrialization and which are frequently misguided by economic exigencies imposed by the industrialized north. As a village located in an Important Bird Area, in the vicinity of a Ramsar Site and on the edge of a First-Degree Natural Conservation Area, the case area in question provides a trenchant example for the study of the meaning of sustainability in a southern socio-politico-economic zone and a challenge for the architectural designer. Seyrek is a mirror of global as well as local problems today. It is located in the middle of Gediz Delta, the large agricultural land as well, and on the edge of several specialized industrial districts of the urban sprawl of Izmir. Placing the analysis of the case area in the context of the wider framework of international policy, the thesis proceeds to propose specific design tools for a sustainable housing development project in a crucial typical new residential segment of the semi-rural settlement of Seyrek.

What is design? What are the main design disciplines, and how do they interrelate? How does design theory and context help you improve your studio work? What do you need to know by the end of your course to get a good career? What can you do to become a knowledgeable designer and improve your skills so that you stand out from the crowd? Whether you are already studying design, thinking about choosing a course, or are well on your way to finding your first job, this essential and uniquely comprehensive book will introduce you to the world of design and support you throughout your studies and on into the industry. Key features Develops your core skills and supports you in making the most of your studies. Describes the multi-disciplinary design world by exploring the various design disciplines – graphics, fashion and textiles, three-dimensional design, craft, spatial, interactive media, and theatre, film and television. Contains crucial practical information so you're ready for your career - placements, working with industry and self-employment, networking, job-seeking and how to succeed in your own business. Covers the key practical, theoretical and cultural fundamentals of design to help you understand and inform your practice - chapters on creativity and innovation, history, culture and context, how to communicate design, colour theory, aesthetics, and how to design with ethical, social and responsible considerations. Comprises chapters written by designers and lecturers, all experts in their fields. Includes stories, career profiles and first-hand quotes by students, established designers and industry specialists exploring what it's like to study and to work in the design industry today. Identifies important books and websites for further reading. The Design Student's Handbook will guide you along the road to a successful and fulfilling

career and is an essential text for studying any of the design disciplines.

"Written for architects, planners, landscape architects, engineers, public officials, and change agent professionals, this important resource defines the issues of sustainable design, illustrates conceptual and case studies, and provides support for continued learning in this increasingly central focus of architects' and urban planners' work."--Jacket.

Cultural sustainability is a very important aspect of the overall sustainability framework and is regarded as the fourth pillar alongside the other three: environmental, economic, and social sustainability. However, the concept is neither fully explored, nor widely accepted or recognized. This book elicits the interplay of nature-culture-architecture and theorizes the concept of cultural sustainability and culturally sustainable architecture. It identifies four key themes in Chinese philosophy: Harmony with Heaven, Harmony with Earth, Harmony with Humans, and Harmony with Self, along with Greek philosopher Aristotle's physics: form, space, matter, and time, it sets them as criteria to evaluate the renewed and new courtyard housing projects constructed in China since the 1990s. Using an innovative architectural and social science approach, this book examines the political, economic, social, and spatial factors that affect cultural sustainability. Supported by a multiplicity of data including: field surveys, interviews with residents, architects, and planners, time diaries, drawings, photos, planning documents, observation notes, and real estate brochures, the book proposes new courtyard garden house design strategies that promote healthy communities and human care for one another, a concept that is universally applicable. The volume is a first opportunity to take a holistic view, to encompass eastern and western, tangible and intangible, cultures in the theorization of cultural sustainability and culturally sustainable architecture. It is a comprehensive contribution to architectural theory.

"When nature inspires our architecture-not just how it looks but how buildings and communities actually function-we will have made great strides as a society.

Biophilic Design provides us with tremendous insight into the 'why,' then builds us a road map for what is sure to be the next great design journey of our times." -Rick Fedrizzi, President, CEO and Founding Chairman, U.S. Green Building Council

"Having seen firsthand in my company the power of biomimicry to stimulate a wellspring of profitable innovation, I can say unequivocally that biophilic design is the real deal. Kellert, Heerwagen, and Mador have compiled the wisdom of world-renowned experts to produce this exquisite book; it is a must reading for scientists, philosophers, engineers, architects and designers, and-most especially-businesspeople. Anyone looking for the key to a new type of prosperity that respects the earth should start here." -Ray C. Anderson, founder and Chair, Interface, Inc. The groundbreaking guide to the emerging practice of biophilic design This book offers a paradigm shift in how we design and build our buildings and our communities, one that recognizes that the positive experience of natural systems and processes in our buildings and constructed

landscapes is critical to human health, performance, and well-being. Biophilic design is about humanity's place in nature and the natural world's place in human society, where mutuality, respect, and enriching relationships can and should exist at all levels and should emerge as the norm rather than the exception. Written for architects, landscape architects, planners, developers, environmental designers, as well as building owners, *Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life* is a guide to the theory, science, and practice of biophilic design. Twenty-three original and timely essays by world-renowned scientists, designers, and practitioners, including Edward O. Wilson, Howard Frumkin, David Orr, Grant Hildebrand, Stephen Kieran, Tim Beatley, Jonathan Rose, Janine Benyus, Roger Ulrich, Bert Gregory, Robert Berkebile, William Browning, and Vivian Loftness, address: \* The basic concepts of biophilia, its expression in the built environment, and how biophilic design connects to human biology, evolution, and development. \* The science and benefits of biophilic design on human health, childhood development, healthcare, and more. \* The practice of biophilic design-how to implement biophilic design strategies to create buildings that connect people with nature and provide comfortable and productive places for people, in which they can live, work, and study. Biophilic design at any scale-from buildings to cities-begins with a few simple questions: How does the built environment affect the natural environment? How will nature affect human experience and aspiration? Most of all, how can we achieve sustained and reciprocal benefits between the two? This prescient, groundbreaking book provides the answers.

*Sustainable Design A Critical Guide*. Princeton Architectural Press

This volume includes papers presented at the 4th International Conference on Sustainable Design and Manufacturing (SDM-17) held in Bologna, Italy, in April 2017. The conference covered a wide range of topics from cutting-edge sustainable product design and service innovation, sustainable processes and technology for the manufacturing of sustainable products, sustainable manufacturing systems and enterprises, decision support for sustainability, and the study of the societal impact of sustainability including research for circular economy. Application areas are wide and varied, and the book provides an excellent overview of the latest research and development in the area of Sustainable Design and Manufacturing.

If you're embarking upon a career in interior design, here's a highly visual overview of the profession, with in-depth material on educational requirements, design specialties, finding a job, and the many directions a career in interior design can take. Featuring informative interviews with working designers, this Second Edition includes updated educational requirements and a list of accredited interior design programs in the United States and Canada.

Introductory technical guidance for professional engineers and planners interested in principles of sustainable design. Here is what is discussed: 1. DESIGN OF SOLAR WATER HEATING SYSTEMS 2. LOW IMPACT DESIGN 3. NATURAL VENTILATION FOR BUILDINGS 4. PASSIVE SOLAR HEATING OF BUILDINGS 5. PLANNING SOLAR WATER HEATING

SYSTEMS 6. SOLAR COLLECTORS 7. SOLAR COOLING SYSTEMS 8. SOLAR ENERGY FUNDAMENTALS 9. SUSTAINABLE DESIGN OF BUILDINGS 10. SUSTAINABLE LIGHTING DESIGN 11. WATER DESALINATION.

Cities and towns are among humanity's greatest achievements, yet no single individual or organization creates them. The buildings, streets, and gardens of even a small town embody substantial investments of money, natural resources, and political capital. Much more than the sum of its parts, a settlement's vitality comes from its collective composition. Sometimes the cities and towns that emerge are glorious places, but too frequently they have only fragments of greatness or are soulless and environmentally unhealthy. Our new Architecture Brief Urban Composition shows architects, planners, artists, and engineers of individual projects how they can best fulfill their public trust to help make meaningful urban places. Each chapter contains a set of design queries followed by a discussion, illustrations, and references for further research. This accessible primer on urban design provides guidelines for designing buildings or plans for large cities or small towns. Urban Composition showcases projects across the United States and internationally, in metropolitan areas such as Chicago, Seattle, and London, and small communities such as Marfa, Texas.

Advance Praise for Dynamic Urban Design "Finally, in one book a complete guide to the theory, practice, and potential of urban design by one of Canada's preeminent urban designers." —David R. Witty, former dean, School of Architecture, University of Manitoba, Canada "Michael von Hausen has given us a clear and hopeful path to the creation of a sustainable urbanism, one that will be inspiring and instructive to practitioners, students, and all those who are focused on the most fundamental issue of our time." —Jim Adams, architect and principal, McCann Adams Studio, Austin, Texas "Dynamic Urban Design establishes Michael von Hausen as a sustainable urban design authority. Sharing insights taken from six millennia ... von Hausen articulates a clearly understandable and masterfully illustrated process." —Kevin Harris, architect and principal, Kevin Harris Architect, Baton Rouge, Louisiana Whether we are practicing urban designers or interested citizens, virtually all of us want to live in communities that are safe, attractive, and healthy. Yet our good intentions face conflicting goals. How are we going to improve community health, reduce crime, and improve mobility in cities while at the same time expanding our cities to accommodate growth? How are we going to do all this with seemingly limited financial resources? How do we do more with less, live within our means, and still create a higher quality of life? The list of challenges is almost endless. Urban design is emerging as a critical interface that brings various professions together to address these challenges and improve our communities. For future human survival and quality of life, the world needs a more inclusive, rigorous, socially inspired, and comprehensive urban design model integrated with sustainable development. This book delivers that model—a reference guide for doing it right.

Architecture, Sustainable Design A comprehensive book on the sustainable design of research laboratories Today's research laboratories are complex and difficult building types to design, and making them sustainable adds more obstacles. Written by members of the well-known firm KlingStubbins, under the guidance of its Directors of Laboratory Planning, Engineering, and Sustainability, Sustainable Design of Research Laboratories represents a multidisciplinary approach to addressing these challenges. With the needs of architects, engineers, construction professionals, and facility owners in mind, this book provides a road map for sustainable planning, design, construction, and operations. The book is valuable both to experienced laboratory designers seeking guidance on sustainable strategies, as well as professionals versed in sustainable design who want insight into laboratory applications. With content rich in guidance on performance strategies, even the most technically oriented reader will find valuable lessons inside. This book: Focuses on the links between best sustainable practices and the specific needs of research laboratories Provides a number of case studies of the best

contemporary sustainably designed labs, with a focus on architecture and engineering  
Explores the challenges in applying rating systems, including LEED, to laboratory buildings  
Examines unique considerations of sustainable approaches in leased and renovated laboratories  
Includes contributions by experts on approaches to integrated design, site design, programming, and commissioning  
This important book shows how theoretical ideas can be applied to real-life laboratory projects to create healthier and more efficient research environments.

Integrated Sustainable Design of Buildings aims to provide a guide to members of design and masterplanning teams on how to deliver sustainable development and buildings cost effectively, meeting current and emerging UK and international statutory and planning requirements. Using a series of case histories and examples from the author's ten years of providing sustainability advisory services the book sets out a clear and understandable strategy that deals with all aspects of sustainable design and construction and the implications for delivery, costs, saleability and long term operation. The extensive scope includes all aspects of environmental, social and economic sustainability, including strategies to reduce carbon emissions and the impact of climate change. Integrated Sustainable Design of Buildings appeared in the Cambridge Top 40 Sustainability Books of 2010.

This book deals with indoor environmental quality (IEQ), which encompasses diverse factors that affect human life inside a building. These factors include indoor air quality (IAQ), lighting, acoustics, drinking water, ergonomics, electromagnetic radiation, and so on. Enhanced environmental quality can improve the quality of life and productivity of the occupants, increase the resale value of the building, and minimize the penalties on building owners. The book covers an overview of IEQ and its research progress, IAQ and its monitoring, the best indoor illumination scenes, IEQ in healthcare buildings, and acoustic comfort in residential buildings and places of worship. This book is expected to benefit undergraduate and postgraduate students, researchers, teachers, practitioners, policy makers, and every individual who has a concern for healthy life.

The CSI Sustainable Design and Construction Practice Guide is a compilation of information and recommended best practices for those who participate in the design and construction of commercial-level sustainable facilities. It offers guidelines and standards for applying sustainable design and construction principles in practical terms. This Practice Guide includes an overview of sustainable design standards and rating systems; an overview of green products and systems, and how to evaluate them; the lifecycle of a building; and the roles and responsibilities of members of the design and construction team.

Sustainable Site Design introduces the core concepts of sustainability as applied to landscape architecture. Focusing on site-scale design, this book provides a regional framework for integrating sustainable practices throughout the design process. From landscape analysis to program and design development, each design phase is illustrated with detailed case studies covering a broad range of innovative built landscape architectural projects.

This book, based on authoritative sources and reports, links environmental communication to different fields of competence: environment, sustainability, journalism, mass media, architecture, design, art, green and circular economy, public administration, big event management and legal language. The manual offers a new, scientifically based perspective, and adopts a theoretical-practical approach, providing readers with qualified best practices, case studies and 22 exclusive interviews with professionals. A fluent style of writing leads the readers through specific details, enriching their knowledge without being boring. As such

it is an excellent preparatory and interdisciplinary academic tool intended for university students, scholars, professionals, and anyone who would like to know more on the matter.

Containing papers presented at the 9th International Conference on Sustainable Development and Planning this volume brings together the work of academics, policy makers, practitioners and other international stakeholders and discusses new academic findings and their application in planning and development strategies, assessment tools and decision making processes. Problems related to development and planning are present in all areas and regions of the world. Accelerated urbanisation has resulted in both the deterioration of the environment and quality of life. Taking into consideration the interaction between different regions and developing new methodologies for monitoring, planning and implementation, new strategies can offer solutions mitigating environmental pollution and non-sustainable use of available resources. Energy saving and eco-friendly buildings have become an important part of modern day progress with emphasis on resource optimisation. Planning is a key part in ensuring that these solutions along with new materials and processes are efficiently incorporated. Planners, environmentalists, architects, engineers and economists have to work collectively to ensure that present and future needs are met. The papers in the book cover a number of topics, including: City planning; Regional planning; Rural developments; Sustainability and the built environment; Sustainability supply chain; Resilience; Environmental management; Energy resources; Cultural heritage; Quality of life; Sustainable solutions in emerging countries; Sustainable tourism; Learning from nature; Transportation; Social and political issues; Community planning; UN Sustainable Development Goals and Timber Structures.

This volume consists of 52 peer-reviewed papers, presented at the International Conference on Sustainable Design and Manufacturing (SDM-19) held in Budapest, Hungary in July 2019. Leading-edge research into sustainable design and manufacturing aims to enable the manufacturing industry to grow by adopting more advanced technologies, and at the same time improve its sustainability by reducing its environmental impact. The topic includes the sustainable design of products and services; the sustainable manufacturing of all products; energy efficiency in manufacturing; innovation for eco-design; circular economy; industry 4.0; industrial metabolism; automotive and transportation systems. Application areas are wide and varied. The book will provide an excellent overview of the latest developments in the Sustainable Design and Manufacturing Area.

This book consists of 113 selected papers presented at the 2015 International Conference on Mechanical Engineering and Control Systems (MECS2015), which was held in Wuhan, China during January 23–25, 2015. All accepted papers have been subjected to strict peer review by two to four expert referees, and selected based on originality, ability to test ideas and contribution to

knowledge. MECS2015 focuses on eight main areas, namely, Mechanical Engineering, Automation, Computer Networks, Signal Processing, Pattern Recognition and Artificial Intelligence, Electrical Engineering, Material Engineering, and System Design. The conference provided an opportunity for researchers to exchange ideas and application experiences, and to establish business or research relations, finding global partners for future collaborations. The conference program was extremely rich, profound and featured high-impact presentations of selected papers and additional late-breaking contributions. Contents: Mechanical Engineering and Manufacturing Technologies Automation and Control Engineering Communication Networking and Computing Technologies Signal Processing and Image Processing Pattern Recognition and Artificial Intelligence Micro Electromechanical Systems Technology and Application Material Science and Material Engineering System Design and Simulation Sustainable City and Sustainable Development Readership: Researchers and graduate students interested in mechanical engineering and control systems. Key Features: It is one of the leading international conferences for presenting novel and fundamental advances in the fields of Mechanical Engineering and Control Systems The proceedings put together the most up-to-date, comprehensive and worldwide state-of-the-art knowledge in Mechanical Engineering and Control Systems Many of the articles are the output of research funded by Chinese research agencies, representing the state-of-the-art technologies in Chinese engineering R&D Keywords: Mechanical Engineering; Automation; Computer Networks; Signal Processing; Pattern Recognitions and Artificial Intelligence; Electrical Engineering; Material Engineering; System Design

Written for students and practitioners in the fields of architecture and interior design, our new Architecture Brief Sustainable Design provides a concise overview of all the techniques available for reducing the energy footprint of structures and spaces. With clear, simple language and a practical "can-do" approach, author David Bergman covers everything from the profession's ethical responsibility, to design structures and spaces that sustain our natural resources, to specific considerations such as rainwater harvesting, graywater recycling, passive heating techniques, solar orientation, green roofs, wind energy, daylighting, indoor air quality, material evaluation and specification, and how to work with green building certification programs.

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