

The Building Environment Active And Passive Control Systems

Timo Carl presents alternatives to curtain wall facades and other flat boundaries creating autonomous spaces. He investigates facade typologies with multiple material layers to strategize the relationship between buildings and their environment. By revisiting Le Corbusier's seminal *brise soleil* an alternative reading of the modern project emerges: one that is not based on classical compositional rules, but instead on the dynamic relationships with environmental forces. Finally, an exciting series of project-based investigations sets out innovative ways in which novel deep skins combine energy-conscious performance with the poetics of architecture.

Sustainable Design for the Built Environment marks the transition of sustainable design from a specialty service to the mainstream approach for creating a healthy and resilient built environment. This groundbreaking and transformative approach introduces sustainable design in a clear, concise, easy-to-read format. This book takes the reader deep into the foundations of sustainable design, and creates a holistic and integrative approach addressing the social, cultural, ecological, and aesthetic aspects in addition to the typical performance-driven goals. The first

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section of the book is themed around the origins, principles, and frameworks of sustainable design aimed at inspiring a deeper, broader, and more inclusive view of sustainability. The second section examines strategies such as biophilia and biomimicry, adaptation and resilience, health and well-being. The third section examines the application of sustainability principles from the global, urban, district, building, and human scale, illustrating how a systems thinking approach allows sustainable design to span the context of time, space, and varied perspectives. This textbook is intended to inspire a new vision for the future that unites human activity with natural processes to form a regenerative, coevolutionary model for sustainable design. By allowing the reader an insightful look into the history, motivations, and values of sustainable design, they begin to see sustainable design, not only as a way to deliver green buildings, but as a comprehensive and transformative meta-framework that is so needed in every sector of society. Supported by extensive online resources including videos and PowerPoints for each chapter, this book will be essential reading for students of sustainability and sustainable design.

The Architectural Expression of Environmental Control Systems examines the way project teams can approach the design and expression of both active and passive environmental control systems in a more creative way. Using seminal

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case studies from around the world and interviews with the architects and environmental engineers involved, the book illustrates innovative responses to client, site and user requirements, focusing upon elegant design solutions to a perennial problem. This book will inspire architects, building scientists and building services engineers to take a more creative approach to the design and expression of environmental control systems - whether active or passive, whether they influence overall building form or design detail.

The book encodes a vision for the actively sustainable management and development of the built environment by referring to the application of timber-based construction systems as additive solutions for the multi-purpose improvement of existing buildings. It translates this vision into an innovative methodology for the management of the entire building process from design to production, operation, and maintenance - and the assessment of timber-based construction performances across the whole building life-cycle. This approach is based on a multi-dimensional analysis, which starts from the structure of the Active House (AH) protocol, improved through information-integrated digital environments and multi-criteria evaluation methods, such as BIM and Design Optioneering. During the design stage, indeed, it analyzes and compares different design choices, according to the DO method, until the definition and

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validation of the As-Built step, while in the operational phase, it refers to sensors-retrieved data to show the evolution of the building behaviour, accounting for real users interaction, building performances decay and needs of maintenance, defining the digital twin of the building: a real Cognitive Building. Finally, the application of this methodology identifies innovative models of processes, products, and design of wood-based construction technologies, suitable to satisfy the needs of the 2D/3D construction layering for the sustainable transformation of the built environment.

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An accessible, climate-diverse guide that transforms readers from sustainable design novices to whole-solution problem solvers. Sustainable Design Basics is a student-friendly introduction to a holistic and integral view of sustainable design. Comprehensive in scope, this textbook presents basic technical information, sustainability strategies, and a practical, step-by-step approach for sustainable building projects. Clear and relatable chapters illustrate how to identify the factors that reduce energy use, solve specific sustainable design problems, develop holistic design solutions, and address the social and cultural aspects of sustainable design. Requiring no prior knowledge of the subject, the text’s easy-to-follow methodology leads readers through the fundamental sustainable design

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principles for the built environment. Sustainably-constructed and maintained buildings protect the health and improve the productivity of their occupants, as well as help to restore the global ecosystem. The authors, leading practitioners and educators in sustainable design, have created a resource that provides a solid introduction to broad level sustainability thinking that students can take forward into their professional practice. Topics include space planning for sustainable design, integrative and collaborative design, standards and rating systems, real-world strategies to conserve energy and resources through leveraging renewable natural resources and innovative construction techniques and their impact on our environment. Usable and useful both in and beyond the classroom, this book: Covers building location strategies, building envelopes and structures, integration of passive and active systems, green materials, and project presentation Examines cultural factors, social equity, ecological systems, and aesthetics Provides diverse student exercises that vary by climate, geography, setting, perspective, and typology Features a companion website containing videos for each sustainable strategy, matrices, templates, Sketch-Up and AutoCAD files, PowerPoint slides, and extensive instructor resources Sustainable Design Basics is an important resource aimed at undergraduate architecture and interior design students, or first-year graduate students, as well

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as design professionals wishing to integrate sustainable design knowledge and techniques into their practice.

As the construction industry continues to develop within the natural environment, the industry has to take strong measures to ensure that its activities are in harmony with the environment. The challenge for the construction sector is not just to respond to the need for adequate housing and rapid urbanisation, but to do it in a way that is socially and ecologically responsible. This book begins with the current progress of the construction industry in Malaysia before shifting to the fragile relationship between construction and environment. Knowing the rapid development in Malaysia and how construction can affect the environment, this book delves into some evidence of environmental degradation in Malaysia. In the mist of degradation, there is some light shone by the government agencies, state government and some construction players who have initiated several actions to improve present situation. Construction players must be ready to address these concerns, aware of the requirements and comply with it, while the government must be ready to implement and enforce the requirement. An effective planning, implementation and monitoring is vital if the environment is to be part of the culture of the construction industry everywhere.

With the improved efficiency of heating, cooling and lighting in buildings crucial to

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the low carbon targets of all current governments, "Building Science: concepts and applications" provides a timely and much-needed primer on the key concepts of heat, energy, light and sound. Taking a logical and didactic approach, the author introduces the reader to the underlying concepts and principles of the thermal, lighting, and acoustic determinants of building design in four integrated sections. The first section explores the thermal building environment and the principles of thermal comfort, translating these principles into conceptual building design solutions. The author examines the heat flow characteristics of the building envelope and explains steady state design methods that form the basis of most building codes. He discusses the sun as a natural heat source and describes the principles of active and passive solar building design solutions. The second section introduces the scientific principles of light, color, and vision, stressing the importance of daylight in building design, presenting the Daylight Factor design concept and methodology, and discussing glare conditions and their avoidance. It also addresses artificial lighting, delving into the prominent role that electricity plays in the production of light by artificial means and comparing the efficacy and characteristics of the various commercially available light sources in terms of the energy to light conversion ratio, life span, available intensity range, color rendition properties, and cost. The third section deals with

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the various aspects of sound that impact the design of the built environment, discussing the nature of sound as a physical force that sets any medium through which it travels into vibration and laying the foundations for the treatment of sound as an important means of communication as well as a disruptive disturbance. The final section discusses the foundational concepts of ecological design as a basis for addressing sustainability issues in building design solutions. These issues include the embedded energy of construction materials, waste management, preservation of freshwater and management of graywater, adoption of passive solar principles, energy saving measures applicable to mechanical building services, and the end-of-lifecycle deconstruction and recycling of building materials and components. WEBSITE: A companion website for the book offers freely downloadable resources for students and lecturers: Multiple Choice questions and answers: allow students to test their understanding of the concepts and principles of climate, heat, light, and sound, as well as their application in the design and construction of buildings. Power Point slides: have been prepared for lecturers to highlight the underlying fundamental principles pertaining to the environmental aspects of building science, with some practical examples from the natural and built environment. Cover design by Andrew Magee

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The definitive guide to the design of environmental control systems for buildings—now updated in its 13th Edition *Mechanical and Electrical Equipment for Buildings* is the most widely used text on the design of environmental control systems for buildings—helping students of architecture, architectural engineering, and construction understand what they need to know about building systems and controlling a building's environment. With over 2,200 drawings and photographs, this 13th Edition covers basic theory, preliminary building design guidelines, and detailed design procedure for buildings of all sizes. It also provides information on the latest technologies, emerging design trends, and updated codes. Presented in nine parts, *Mechanical and Electrical Equipment for Buildings, Thirteenth Edition* offers readers comprehensive coverage of: environmental resources; air quality; thermal, visual, and acoustic comfort; passive heating and cooling; water design and supply; daylighting and electric lighting; liquid and solid waste; and building noise control. This book also presents the latest information on fire protection, electrical systems; and elevator and escalator systems. This Thirteenth Edition features: Over 2,200 illustrations, with 200 new photographs and illustrations All-new coverage of high-performance building design Thoroughly revised references to codes and standards: ASHRAE, IES, USGBC (LEED), Living Building Challenge, WELL Building Standard, and more Updated offering of best-in-class ancillary materials for students and instructors available via the book's companion website Architect Registration Examination® (ARE®) style study questions

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available in the instructor's manual and student guide Mechanical and Electrical Equipment for Buildings, has been the industry standard reference that comprehensively covers all aspects of building systems for over 80 years. This Thirteenth Edition has evolved to reflect the ever-growing complexities of building design, and has maintained its relevance by allowing for the conversation to include "why" as well as "how to."

This primer for architects explores the basic physical principles and requirements of every aspect of passive and active controls in buildings. Avoiding needless jargon, Environmental Issues for Architecture supports an understanding of environmental systems in order to inform architectural design. With topics ranging from lighting, acoustics, thermal control, plumbing, fire protection and egress, to elevators and escalators, all of the latest technologies are supported. Designer-friendly, this rich resource gives just enough technical information for architects to design buildings that are efficient and comfortable.

Get the updated guide to active and passive control systems for buildings. To capitalize on today's rapidly evolving, specialized technologies, architects, designers, builders, and contractors work together to plan the mechanical and electrical equipment that controls the indoor environment of a building. The Building Environment: Active and Passive Control Systems, Third Edition helps you take advantage of design innovations and construction strategies that maximize the comfort, safety, and energy efficiency of

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buildings. From active HVAC systems to passive methods, lighting to on-site power generation, this updated edition explains how to strategically plan for and incorporate effective, efficient systems in today's buildings. It covers the underlying thermal theories and thermodynamic principles and focuses on design that enhances the building environment and minimizes the impact on the world's environment. The Building Environment goes beyond the ABCs of HVAC and covers: On-site power generation, including wind turbines, solar photovoltaic cells, fuel cells, and more. Plumbing systems, fire protection, signal systems, conveying systems, and architectural acoustics. Procedures and/or formulas for performing heat loss, heat gain, and energy use calculations, determining the rate of heat flow, calculating solar energy utilization, doing load calculations, and more. Details on the latest building codes and standards references. New information on the sustainable design of building systems and energy efficiency, including new technologies. The latest thinking and data on a building's impact on the environment, indoor air quality, and "sick building syndrome." Design economics, including the payback period, life-cycle cost, comparative value analysis, and building commissioning. A practical on-the-job tool for architects, designers, builders, engineers, contractors, and other specialists, this Third Edition is also a great reference for architecture students who will lead tomorrow's design teams. Visit the companion Web site at www.wiley.com/go/bradshaw.

This book constitutes late breaking papers from the 22nd International Conference on

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Human-Computer Interaction, HCII 2020, which was held in July 2020. The conference was planned to take place in Copenhagen, Denmark, but had to change to a virtual conference mode due to the COVID-19 pandemic. From a total of 6326 submissions, a total of 1439 papers and 238 posters have been accepted for publication in the HCII 2020 proceedings before the conference took place. In addition, a total of 333 papers and 144 posters are included in the volumes of the proceedings published after the conference as “Late Breaking Work” (papers and posters). These contributions address the latest research and development efforts in the field and highlight the human aspects of design and use of computing systems. The 34 late breaking papers presented in this volume were organized in two topical sections named: Virtual, Augmented and Mixed Reality Design and Implementation; and User Experience in Virtual, Augmented and Mixed Reality.

This book provides a review of environmental and energy research with respect to urban building projects. It describes how to overcome related challenges in environmental design of urban buildings. The book discusses the passive and active environmental systems within building concepts.

This book is for all those actively working in the built environment. It presents the latest theory and practice of engaging with stakeholders to co-design, develop and manage thriving places. It starts from the importance of integrating design of nature into practice built on a foundation of First Nations understanding of place. The art of engagement of

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community, government and the development industry is discussed with reference to case studies and best practice techniques. The book then focuses on the critical role placemaking has in supporting resilience and adaptability of communities and looks at issues of leadership and governance. Building on these steps for placemaking, the last parts of the book address economics, evaluation, digital and art based tools and approaches to support projects that aim to create an engaged, contributive, collaborative and active citizen.

The construction industry is a vibrant and active industry. The building sector is responsible for creating, modifying and improving the living environment of humanity. This volume presents solutions that facilitate and promote the adoption of policies, methods and tools to accelerate the movement towards a global sustainable built environment.

This popular, topically organized, and thoroughly updated child and adolescent development text presents you with the best theories, research, and practical advice that developmentalists have to offer today. Authors David R. Shaffer and Katherine Kipp provide you with a current and comprehensive overview of child and adolescent development, written in clear, concise language that talks to you rather than at you. The authors also focus on application showing how theories and research apply to real-life settings. As a result, you will gain an understanding of developmental principles that will help you in your roles as parents, teachers, nurses, day-care workers, pediatricians,

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psychologists, or in any other capacity by which you may one day influence the lives of developing persons. Available with InfoTrac Student Collections

<http://gocengage.com/infotrac>. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Discusses the theoretical bases for thermal control such as comfort, heat transfer, psychrometrics, building heat gains and losses, thermal mass, and condensation; the systems used to control the thermal environment within buildings; electrical systems, plumbing systems, fire protection, noise control; and, how to make design decisions based on economics.

Did you know that the Environmental Protection Agency (EPA) has in the past, defined indoor air pollution as one of the most significant environmental threats to human health? This syndrome is relatively unknown and poorly researched. This book will benefit you and all the people who work, live, or play in the building. In the last chapter I will explain in detail about my plan for the creation of a Team to monitor your building and any complaints regarding SBS.

From the history of interior design to professional development, this guide completely covers the process of interior design - the development of a design concept, analysis of built spaces, programming and functional relationships, space planning, and design development presentations.

Written for architects, this title addresses how to design and construct buildings to

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satisfy occupants' physical and physiological needs. It serves as an introduction to the subject of environmental controls, and presents information for schematic design of buildings. It demonstrates how each system is integrated with other building systems. Modern buildings are both wasteful machines that can be made more efficient and instruments of the massive, metropolitan system engendered by the power of high-quality fuels. A comprehensive method of environmental design must reconcile the techniques of efficient building design with the radical urban and economic reorganization that we face. Over the coming century, we will be challenged to return to the renewable resource base of the eighteenth-century city with the knowledge, technologies, and expectations of the twenty-first-century metropolis. This book explores the architectural implications of systems ecology, which extends the principles of thermodynamics from the nineteenth-century focus on more efficient machinery to the contemporary concern with the resilient self-organization of ecosystems. Written with enough technical material to explain the methods, it does not include in-text equations or calculations, relying instead on the energy system diagrams to convey the argument. Architecture and Systems Ecology has minimal technical jargon and an emphasis on intelligible design conclusions, making it suitable for architecture students and professionals who are engaged with the fundamental issues faced by sustainable design. The energy systems language provides a holistic context for the many kinds of performance already evaluated in architecture—from energy use to material selection

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and even the choice of building style. It establishes the foundation for environmental principles of design that embrace the full complexity of our current situation.

Architecture succeeds best when it helps shape, accommodate, and represent new ways of living together.

The first point of reference for all OHS and environmental best practice and strategy providing operational guidance with examples to achieve optimal workplace safety and environmental sustainability.

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This set of proceedings is based on the International Conference on Advances in Building Technology in Hong Kong on 4-6 December 2002. The two volumes of proceedings contain 9 invited keynote papers, 72 papers delivered by 11 teams, and 133 contributed papers from over 20 countries around the world. The papers cover a wide spectrum of topics across the three technology sub-themes of structures and construction, environment, and information technology. The variety within these categories spans a width of topics, and these proceedings provide readers with a good general overview of recent advances in building research.

In hot dry or warm humid climates, more than half of the urban peak load of energy consumption is used to satisfy air-conditioning demands alone. Since the urbanization rate in developing countries is extreme, the pressure placed on energy resources to satisfy the future requirements of the built environment will

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be great, unless new, more cost-effective measures can be introduced. Stay Cool is an essential guide for planning and design using active design principles and passive means to satisfy human comfort requirements specifically in these climate zones, based on examples of traditional and modern constructions. The book demonstrates how a design strategy for urban environments and individual buildings, incorporating naturally occurring resources and specific energy-efficient technologies, can create a location, form and structure that promote significant energy-savings. Such strategies can be applied to low cost housing, or indeed to any other buildings, in order to improve comfort with passive means and low energy budgets. Following an outline of climatic issues, characteristics and thermal comfort requirements, the book details the available techniques and technologies that can be used to shape both built and external environments, the building envelope, material selections and natural ventilation and cooling methods to satisfy both human requirements and the need for energy efficiency. It also includes an active design checklist and summary of available design checking tools, a rehabilitation guide for existing urban, building and external environments, and solar charts. Planners, architects, engineers, technicians and building designers will find Stay Cool an inspirational guide and an essential reference when working with planning and design of the built environment in hot

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dry and warm humid climate zones. It will also be of benefit to students, academics and researchers with an interest in sustainable and energy-efficient architecture techniques and practice.

More than half the world's population lives in urban areas with the growth of super-cities of tens of millions of inhabitants, and although cities only encompass two per cent of the world's land surface, they are responsible for consuming over 75 per cent of the planet's resources and produce 75 per cent of the world's waste. In the UK, over 80 per cent of the population already lives in urban areas, and the country is going through a new phase of urban expansion and regeneration that will affect the way we live for decades to come. This study, the Commission's 26th report, focuses on the environmental impacts of towns and cities, and considers the relationship between the urban environment and human health and wellbeing. The report finds that although there are many opportunities and attractions in urban living, there are also many environmental problems including contributing to greenhouse gas emissions, excess water consumption, traffic congestion and poor housing conditions. The report highlights the need for an over-arching urban environment policy to deliver environmental sustainability by co-ordinating the provision of key services and to create the institutional and social environment which encourages the uptake of existing technology to

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improve urban environmental performance. It calls for a new 'environmental contract' be established to forge partnerships between local and central government and the private and voluntary sectors, with high-level urban environmental targets that government regards as essential, while devolving to local authorities the responsibility for defining and prioritising action on environmental problems of local concern.

The complex art of architecture embraces all of the concerns of the world's cultures. It meets the fundamental needs for shelter from the elements, but, almost from its origins, has acquired other purposes and meanings. The Selective Environment is an approach to environmentally responsive architectural design that seeks to make connections between the technical preoccupations of architectural science, and the necessity, never more urgent than today, to sustain cultural identity at a time of rapid global, technological change.

Scottish Building Standards in Brief takes the highly successful formula of Ray Tricker's Building Regulations in Brief and applies it to the requirements of the Building (Scotland) Regulations 2004. With the same no-nonsense and simple to follow guidance but written specifically for the Scottish Building Standards it's the ideal book for builders, architects, designers and DIY enthusiasts working in Scotland. Ray Tricker and Roz Algar explain the meaning of the regulations, their

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history, current status, requirements, associated documentation and how local authorities view their importance, and emphasises the benefits and requirements of each one. There is no easier or clearer guide to help you to comply with the Scottish Building Standards in the simplest and most cost-effective manner possible.

"Climate change and peak fuel are issues that affect society, technology, politics, market - and also our built environment. Rather than just adapting to these changes, a positive, pro-active approach is needed, combining sustainable policy, planning and design. Smart Building in a Changing Climate presents the latest developments in the area of climate-responsive, energy-effective policy, planning and design. It includes the latest visions, ideas, designs and technology for a sustainable future on various scales, and points at possible directions for the built environment to answer the challenges of climate change in a pro-active and integrative way."--Publisher's description.

This directory has become a valued source of information for energy-efficient building designers and specifiers throughout Europe and the details and scope of product, service and supplier listings have again been extensively updated for this edition.

Sustainable Built Environment is a component of Encyclopedia of Technology,

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Information, and Systems Management Resources in the global Encyclopedia of Life Support Systems (EOLSS), which is an integrated compendium of twenty one Encyclopedias. Environmental conservation and technological innovation are two principal forces that drive the building industry toward the future.

Technological innovation offers many opportunities to make buildings more dynamic and comfortable, and occupants more comfortable and productive. The necessity of environmental conservation, on the other hand, compels all types of developments and human activities to be environmentally responsive. The content of the Theme on Sustainable Built Environment is organized with state-of-the-art presentations covering several topics: Urban Design ; Emerging Issues in Building Design; Environment, Energy and Health in Housing Design; Culture, Management Strategies, and Policy Issues in the Sustainable Built Environment; Using Technology to Improve the Quality of City Life; Urban and Regional Transportation, which are then expanded into multiple subtopics, each as a chapter. These two volumes are aimed at the following five major target audiences: University and College students Educators, Professional practitioners, Research personnel and Policy analysts, managers, and decision makers and NGOs.

AR 200-1 12/13/2007 ENVIRONMENTAL PROTECTION AND ENHANCEMENT

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, Survival Ebooks

Applying Properties of Animals Skins to Inspire Architectural Envelopes Biology influences design projects in many ways; the related discipline is known as biomimetics or biomimicry. Using the animal kingdom as a source of inspiration, Ilaria Mazzoleni seeks to instill a shift in thinking about the application of biological principles to design and architecture. She focuses on the analysis of how organisms have adapted to different environments and translates the learned principles into the built environment. To illustrate the methodology, Mazzoleni draws inspiration from the diversity of animal coverings, referred to broadly as skin, and applies them to the design of building envelopes through a series of twelve case studies. Skin is a complex organ that performs a multitude of functions; namely, it serves as a link between the body and the environment. Similarly, building envelopes act as interfaces between their inhabitants and external elements. The resulting architectural designs illustrate an integrative methodology that allows architecture to follow nature. "Ilaria Mazzoleni, in collaboration with biologist Shauna Price, has developed a profound methodology for architectural and design incentives that anticipates and proposes novel ways to explore undiscovered biological inspirations for various audiences." —Yoseph Bar-Cohen This book presents an in-depth analysis covering climatic and weather conditions, house and building development history, construction methods and technologies, and environmental conditions. It provides relevant house and building information and

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highlights recent advances in hot and humid regions, as well as developments in other regions that are relevant to hot and humid climates. The countries in hot and humid regions, which include the tropical countries, the Middle Eastern countries around the Mediterranean, and many countries of Central Asia and Africa, are home to some of the most challenging conditions in the world in terms of house and building design and construction, and in terms of maintaining indoor thermal comfort and air quality in an energy-efficient way. The book's respective chapters, prepared by expert contributors, cover essential concepts, designs, and construction methodologies for houses and commercial buildings. As such, the book offers a valuable resource for undergraduate and graduate students in architecture and engineering, house and building designers, and building sciences researchers. Building contractors, manufacturers and distributors of building equipment and devices, and government policymakers and legislators will also benefit from the information provided in this book.

Many people, professionals and non-professionals alike, recognize that it is of critical importance to solve global energy and environmental issues. For this purpose, it is essential to have a scientific understanding of what is meant by the "energy" issue and the "environmental" issue. The concept of "exergy" is a scientific concept that exactly fits. The concept of 'energy' is a scientifically-well established concept, namely 'to be conserved'. Then the question is what is really consumed. Exergy: Theory and Applications in the Built Environment is dedicated to answer this fundamental question

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by discussing the theory of “exergy” and by demonstrating its use extensively to describe a variety of systems in particular for built-environmental conditioning. Our immediate environmental space works within the flow of energy and matter in an “exergy-entropy” process, and the built environment can be designed with these energy & environmental issues in mind. Exergy: Theory and Applications in the Built Environment introduces readers who are not familiar with thermodynamics to the concept of exergy with a variety of discussion on the built-environmental space such as heating, cooling, lighting, and others. Readers, including students, researchers, planners, architects and engineers, will obtain a better picture of a sustainable built-environment.

"Fundamentals of Integrated Design for Sustainable Building offers an introduction to green building concepts as well as design approaches that reduce and can eventually eliminate the need for fossil fuel use in buildings while also conserving materials, maximizing their efficiency, protecting the indoor air from chemical intrusion, and reducing the introduction of toxic materials into the environment. It represents a necessary road map to the future designers, builders, and planners of a post-carbon world"--

Universal Design, Design for All and Inclusive Design are all aimed at dismantling physical and social barriers to inclusion in all areas of life. Engagement in universal design is on the increase worldwide as practitioners and researchers explore creative

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and desirable solutions to shape the future of universal design products and practices. This book is a collection of the papers presented at UD2014, the International Conference on Universal Design, held in Lund, Sweden, in June 2014. The conference offered a creative and diverse meeting place for all participants to exchange knowledge, experiences and ideas, and to build global connections and creative networks for future work on universal design. The themes of UD2014 span many aspects of societal life, and the papers included here cover areas as diverse as architecture, public transport, educational and play environments, housing, universal workspaces, and the Internet of things, as well as designs and adaptations for assistive technology. The book clearly demonstrates the breadth of universal design and its ongoing adoption in societies all over the world, and will be of interest to anyone whose work involves building a more inclusive environment for all.

"Environmental Science in Building covers the science, technology and services that relate to the comfort of humans and the environmental performance of buildings. The new edition of this well-established text continues with and improves the environmental narrative based on appropriate principles and technologies such as carbon, lifetime performance and ratings schemes. It also expands the building services content with new coverage of equipment options, specifications and performance implications."--Provided by publisher.

Energy efficiency in buildings requires, among other things, that ventilation be

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appropriately dimensioned: too much ventilation wastes energy, and insufficient ventilation leads to poor indoor air quality and low comfort. Studies have shown that ventilation systems seldom function according to their commissioned design. They have also shown that airflow measurement results are essential in improving a ventilation system. This key handbook explains why ventilation in buildings should be measured and describes how to measure it, giving applied examples for each measurement method. The book will help building physicists and ventilation engineers to properly commission ventilation systems and appropriately diagnose ventilation problems throughout the life of a building. Drawing on over 20 years of experience and the results of recent international research projects, this is the definitive guide to diagnosing airflow patterns within buildings.

Collection of selected, peer reviewed papers from the 2013 2nd International Conference on Civil, Architectural and Hydraulic Engineering (ICCAHE 2013), July 27-28, 2013, Zhuhai, China. Volume is indexed by Thomson Reuters CPCI-S (WoS). The 324 papers are grouped as follows: Chapter 1: Sustainable City and Regional Development; Chapter 2: Environmental Engineering and Environmental Protection; Chapter 3: Architectural Design and Its Theory; Chapter 4: Renewable Energy, Low Carbon, Energy Saving in Building and Research of Urban Living Environment; Chapter 5: Landscape Planning and Design; Chapter 6: Urban Planning and Design; Chapter 7: Transportation Planning, Traffic Control and Logistics Engineering; Chapter 8:

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Transportation Machinery; Chapter 9: Engineering Management and Engineering Education; Chapter 10: Computer Applications and Information Technologies.

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