



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.

**The Emergence of Biophilic Design**-Jana Söderlund 2019-10-18

This book addresses the emergence of biophilic design, a form of design that looks at people’s intrinsic connection with nature. There is no denying that biophilic design is rapidly expanding globally as an effective response to pressing issues in urban areas and built environments. From being a term few had heard of in 2012, when the author’s research began, to one that is currently trending in a broad range of disciplines, the story of its emergence has never been properly told. The story of the emergence of biophilic design is the story of a social movement and how a gathering of people with a common interest and passion can spark a global trend. The book and the stories within are not only engaging but also informative and educational, offering readers an in-depth understanding of what biophilic design is all about, and how to promote its implementation in their own built environment. Hopefully, they will inspire people to act, to campaign and to implement initiatives in their urban environment, with the confidence that they are capable of making a difference. The author spent three years researching the emergence of biophilic design, and why and how it was driven by certain people who championed the concept. Part of the author’s research involved a three-month tour of ten North American cities, during which she interviewed 26 key players. These people ranged from community leaders, landscape architects, and academics, to the CEOs of NGOs and government leaders. The result is a collection of stories that illustrate the evolution of biophilic design, and how it was frequently born from a passion for, belief in and love of nature, as well as a response to an urban crisis.

**Biophilic Cities**-Timothy Beatley 2011

Tim Beatley has long been a leader in advocating for the "greening" of cities. But too often, he notes, urban greening efforts focus on everything except nature, emphasizing such elements as public transit, renewable energy production, and energy efficient building systems. While these are important aspects of reimagining urban living, they are not enough, says Beatley. We must remember that human beings have an innate need to connect with the natural world (the biophilia hypothesis). And any vision of a sustainable urban future must place its focus squarely on nature, on the presence, conservation, and celebration of the actual green features and natural life forms. A biophilic city is more than simply a biodiverse city, says Beatley. It is a place that learns from nature and emulates natural systems, incorporates natural forms and images into its buildings and cityscapes, and designs and plans in conjunction with nature. A biophilic city cherishes the natural features that already exist but also works to restore and repair what has been lost or degraded. In Biophilic Cities Beatley not only outlines the essential elements of a biophilic city, but provides examples and stories about cities that have successfully integrated biophilic elements—from the building to the regional level—around the world. From urban ecological networks and connected systems of urban greenspace, to green rooftops and green walls and sidewalk gardens, Beatley reviews the emerging practice of biophilic urban design and planning, and tells many compelling stories of individuals and groups working hard to transform cities from grey and lifeless to green and biodiverse.

**Serene Urbanism**-Phillip James Tabb 2016-09-13

Serenity is becoming alarmingly absent from our daily existence, especially within the urban context. Time is dense and space is tumultuous. The idea of the serene has gained currency in postmodern discussions, and when combined with urbanism conjures questions, even contradictions, as the two ideas seem improbable yet their correspondence seems so inherently desirable. Integrated, these two constructs present design challenges as they manifest in differing ways across the rural–urban transect. In response, Part I of this book establishes the theoretical framework through different contemporary perspectives, and concludes with a clear explanation of a theory of serene urbanism. The positive characteristics of urbanism and beneficial qualities of the serene are explored and related to sustainability, biophilia, placemaking and environmental design. Both principles and examples are presented as compelling portraits for the proposal of these new urban landscapes. Part II of the work is an in-depth exploration and analysis of serene urban ideas related to the intentional community being created outside of Atlanta, Georgia, USA. "Serenebe" is the name given to this place to commemorate the value and nuance between the serene and urban.

*Architecture and Energy*-William W. Braham 2013-07-18

Does energy consumption influence architectural style? Should more energy-efficient buildings look different? Can that "look" be used to explain or enhance their performance? Architecture and Energy provides architects and architectural theorists with more durable arguments for environmental design decisions, arguments addressing three different scales or aspects of contemporary construction. By drawing together essays from the leading experts in the field, this book engages with crucial issues in sustainable design, such as: The larger role of energy in forming the cultural and economic systems in which architecture is conceived, constructed, and evaluated The different measures and meanings of energy "performance" and how those measures are realized in buildings The specific ways in which energy use translates into the visible aspects of architectural style. Drawing on research from the UK, US, Europe, and Asia the book outlines the problems surrounding energy and architecture and provides the reader with a considered overview of this important topic.

*Flower City Nature Center*-Emily Van Keuren 2019

"The term biophilia was first used by German psychologist, Erich Fromm in The Anatomy of Human Destructiveness (1973). Derived from "bio" (life) and "philia" (friendly feeling toward), he described biophilia as "the passionate love of life and of all that is alive." This term was reintroduced by American biologist, Edward O. Wilson in Biophilia (1984) as "the innate tendency to focus on life and lifelike processes." Several years later, Wilson co-authored The Biophilia Hypothesis (1993) with social ecologist, Stephen Kellert to further define biophilia, our natural connection with nature. It was the biophilia hypothesis that led to the emergence of biophilic design. Stephen Kellert defined biophilic design as "the deliberate attempt to translate an understanding of the inherent human affinity to affiliate with natural systems and processes...into the design of the built environment..." Unfortunately this concept is not easily translated into design due to the psychological complexity of biophilia. Therefore it is considered a weak biological inclination that is dependent on the choice of humans to nurture their connection with nature. Although biophilia is difficult to understand and implement, when done so correctly, it promotes human health, wellbeing, and productivity. Addressing this issue, this thesis will focus on the promotion of biophilia and biophilic design through the creation of a living laboratory. With this goal in mind, a nature center will be designed to further the understanding of biophilia through observation and research, and application of biophilic design strategies. Located in the heart of a city, where greenery is sparse, this nature center will serve as a biophilic living laboratory for researchers and the surrounding community. The Flower City Nature Center in Rochester, New York, is a biophilic design solution that integrates architecture with nature. Analysis of biophilic metrics in green building standards and biophilic design features in case studies, produced a holistic set of design goals for this project. These biophilic design goals include: daylighting, natural ventilation, biophilic building design, biophilic site design, green materials, green education, energy conservation, and water conservation. Aligning with sustainable design principles, biophilic design focuses on enhancing, preserving, and restoring the natural environment, while promoting a connection with nature through hands-on learning."--Abstract.

**Nature Inside**-William D. Browning 2020-09-01

Written by a leading proponent of biophilic design, this is the only practical guide to biophilic design principles for interior designers. Describing the key benefits, principles and processes of biophilic design, Nature Inside illustrates the implementation of biophilic design in interior design practice, across a range of international case studies – at different scales, and different typologies. Starting with the principles of biophilic design, and the principles and processes in practice, the book then showcases a variety of interior spaces – residential, retail, workplace, hospitality, education, healthcare and manufacturing. The final chapter looks ‘outside the walls’, giving a case study at the campus and city scale. With practical guidance and real-world solutions that can be directly-applied in day-to-day practice, this is a must-have for designers interested in applying biophilic principles.

**Sustainable Design for the Built Environment**-Rob Fleming 2019-01-18

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 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.

**Sustainable Development and Planning VIII**-C.A. Brebbia 2017-01-30

The 8th International Conference on Sustainable Development and Planning is part of a series of biennial conferences on the topic of sustainable regional development which began in Greece in 2003. The papers included in these proceedings report on the latest advances from scientists specialising in the range of subjects included within sustainable development and planning. Planners, environmentalists, architects, engineers, policy makers and economists have to work together in order to ensure that planning and development can meet our present needs without compromising the ability of future generations. The use of modern technologies in planning gives us new potential to monitor and prevent environmental degradation. Problems related to development and planning, which affect both rural and urban areas, are present in all regions of the world and accelerated urbanisation has resulted in both the deterioration of the environment and quality of life. Urban development can also intensify problems faced by rural areas such as forests, mountain regions and coastal areas, which urgently require solutions in order to avoid irreversible damage. The papers in the book cover the following topics: City planning; Regional planning; Rural developments; Sustainability and the built environment; Sustainability indicators; Policies and planning; Environmental planning and management; Energy resources; Cultural heritage; Quality of life; Community planning and resilience; Sustainable solutions in emerging countries; Sustainable tourism; Learning from nature; Transportation Social and political issues and Community planning.

*The Analysis of Environmentally Sustainable Interior Design Practice*-Mihyun Kang 2004

*The Greening of Architecture*-Dr A Senem Deviren 2014-01-02

This accessible and engaging text is the first to offer a comprehensive critical history and analysis of the greening of architecture through accumulative reduction of negative environmental effects caused by buildings, urban designs and settlements. Describing the progressive development of green architecture from 1960 to 2010, it illustrates how it is ever evolving and ameliorated through alterations in form, technology, materials and use and it examines different places worldwide that represent a diversity of cultural and climatic contexts.

**Handbook of Biophilic City Planning & Design**-Timothy Beatley 2017-01-05

"This publication offers practical advice and inspiration for ensuring that nature in the city is more than infrastructure—that it also promotes well-being and creates an emotional connection to the earth among urban residents. Divided into six parts, the Handbook begins by introducing key ideas, literature, and theory about biophilic urbanism. Chapters highlight urban biophilic innovations in more than a dozen global cities. The final part concludes with lessons on how to advance an agenda for urban biophilia and an extensive list of resources."--Publisher.

*Sustainable Site Design*-Claudia Dinep 2010-05-18

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.

*Building Performance Analysis*-Pieter de Wilde 2018-07-23

Explores and brings together the existent body of knowledge on building performance analysis Building performance is an important yet surprisingly complex concept. This book presents a comprehensive and systematic overview of the subject. It provides a working definition of building performance, and an in-depth discussion of the role building performance plays throughout the building life cycle. The book also explores the perspectives of various stakeholders, the functions of buildings, performance requirements, performance quantification (both predicted and measured), criteria for success, and the challenges of using performance analysis in practice. Building Performance Analysis starts by introducing the subject of building performance: its key terms, definitions, history, and challenges. It then develops a theoretical foundation for the subject, explores the complexity of performance assessment, and the way that performance analysis impacts on actual buildings. In doing so, it attempts to answer the following questions: What is building performance? How can building performance be measured and analyzed? How does the analysis of building performance guide the improvement of buildings? And what can the building domain learn from the way performance is handled in other disciplines? Assembles the current body of knowledge on building performance analysis in one unique resource Offers deep insights into the complexity of using building performance analysis throughout the entire building life cycle, including design, operation and management Contributes an emergent theory of building performance and its analysis Building Performance Analysis will appeal to the building science community, both from industry and academia. It specifically targets advanced students in architectural engineering, building services design, building performance simulation and similar fields who hold an interest in ensuring that buildings meet the needs of their stakeholders.

**Experiential Walks for Urban Design**-Barbara E. A. Piga 2021

The edited volume explores the topic of experiential walks, which is the practice of multi- or mono-sensory and in-motion immersion into an urban or natural environment. The act of walking is hence intended as a process of (re-)discovering, reflecting and learning through an embodied experience. Specific attention is devoted to the investigation of the ambiance of places and its dynamic atmospheric perception that contribute to generating the social experience. This topic is gaining increasing attention and has been studied in several forms in different disciplines to investigate the particular spatial, social, sensory and atmospheric character of places. The book contains chapters by experts in the field and covers both the theory and the practice of innovative methods, techniques, and technologies. It examines experiential walks in the perspective of an interdisciplinary approach to environmental and sensory urban design by organising the contributions according to three specific interrelated focuses, namely the exploration and investigation of the multisensory dimension of public spaces, the different ways to grasp and communicate the in-motion experience through traditional and novel forms of representation, and the application of the approach to urban participatory planning and higher education. Shedding new light on the topic, the book offers both a reference guide for those engaged in applied research, and a toolkit for professionals and students.

*Emerging Research in Sustainable Energy and Buildings for a Low-Carbon Future*-Robert J. Howlett 2021

This book contains an introduction and 20 studies, each describing a recent research investigation in the area of sustainable and resilient buildings, built environment infrastructure and renewable energy. Contributions are from many different countries of the world and on a range of topics, representing a sample of research within the ‘sustainable energy and buildings’ field. The book begins with chapters on the sustainable design of buildings, followed by descriptions of issues relating to the renovation, restoration and reconstruction of existing buildings, or in one case a railway wagon. The next part of the book covers factors that form barriers or impediments to low or zero carbon buildings, followed by studies of issues relating to policy and certification. There then follow four chapters on various topics related to sustainable buildings – undergraduate courses, insurance issues, biophilia relating to buildings and thermal conductivity measurement. There are several chapters relating to renewable energy, followed by two chapters with a sustainable transport theme, one relating to electric vehicles, and the other about a sustainable road infrastructure. The final chapter is on the manufacture of sustainable building components for the UK housing sector. The book is of use to engineers, scientists, researchers, practitioners, academics and all those who are interested to develop and use sustainability science and technology for the betterment of our planet and humankind, and to mitigate climate change reality.--

**Sustainable Infrastructure**-S. Bry Sarte 2010-09-07

As more factors, perspectives, and metrics are incorporated into the planning and building process, the roles of engineers and designers are increasingly being fused together. Sustainable Infrastructure explores this trend with in-depth look at sustainable engineering practices in an urban design as it involves watershed master-planning, green building, optimizing water reuse, reclaiming urban spaces, green streets initiatives, and sustainable master-planning. This complete guide provides guidance on the role creative thinking and collaborative team-building play in meeting solutions needed to affect a sustainable transformation of the built environment.

*Sustainable Urbanism*-Douglas Farr 2012-01-09

Written by the chair of the LEED-Neighborhood Development (LEED-ND) initiative, Sustainable Urbanism: Urban Design with Nature is both an urgent call to action and a comprehensive introduction to "sustainable urbanism"--the emerging and growing design reform movement that combines the creation and enhancement of walkable and diverse places with the need to build high-performance infrastructure and buildings. Providing a historic perspective on the standards and regulations that got us to where we are today in terms of urban lifestyle and attempts at reform, Douglas Farr makes a powerful case for sustainable urbanism, showing where we went wrong, and where we need to go. He then explains how to implement sustainable urbanism through leadership and communication in cities, communities, and neighborhoods. Essays written by Farr and others delve into such issues as: Increasing sustainability through density. Integrating transportation and land use. Creating sustainable neighborhoods, including housing, car-free areas, locally-owned stores, walkable neighborhoods, and universal accessibility. The health and environmental benefits of linking humans to nature, including walk-to open spaces, neighborhood stormwater systems and waste treatment, and food production. High performance buildings and district energy systems. Enriching the argument are in-depth case studies in sustainable urbanism, from BedZED in London, England and Newington in Sydney, Australia, to New Railroad Square in Santa Rosa, California and Dongtan, Shanghai, China. An epilogue looks to the future of sustainable urbanism over the next 200 years. At once solidly researched and passionately argued, Sustainable Urbanism is the ideal guidebook for urban designers, planners, and architects who are eager to make a positive impact on our--and our descendants'--buildings, cities, and lives.

**Sustainable Landscape Management**-Ann Marie VanDerZanden 2010-12-21

THE COMPLETE GUIDE TO THE SUSTAINABLE MANAGEMENT OF LANDSCAPES A must-have guide for anyone working with landscapes, Sustainable Landscape Management eases the transition of the landscape industry into a new era of green consciousness. Filled with examples that illustrate best practices, the book provides a practical framework for the development of sustainable management strategies from design to execution and, eventually, to maintenance in an effort to construct landscapes that function more efficiently and minimize the impact on the environment. Sustainable Landscape Management includes: An overview of sustainable design and construction techniques as the basis for the maintenance and management of constructed landscapes Coverage of ecosystem development, managing landscape beds, managing trees and shrubs, and lawn care An entire chapter devoted to issues associated with the use of chemicals in landscape management Guidance on retrofitting existing landscapes for sustainability Reshaping the landscape takes on more significance as society embraces a new value system for advancing environmentally friendly ideals. By following the management principles laid out in this book, readers will learn the key elements for building landscapes that integrate beauty and function to create a sustainable presence that extends well into the future.

*The Biophilia Hypothesis*-Stephen R. Kellert 1995-03-01

This book brings together the views of some of the most creative scientists of our time, each attempting to amplify and refine the concept of biophilia. Contributors to this volume include Jared Diamond, Aaron Katcher, Richard Nelson and others.