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Timber Construction Manual

Walter de Gruyter Das Nachschlagewerk zur Konstruktion mit Holz und Holzwerkstoffen mit einem ausführlichen Kapitel zum Thema Ökologie, bauphysikalischen Grundlagen mit den Schwerpunkten Wärme-, Schall- und Brandschutz. Im Bereich der Tragwerksplanung spielen die neuen Verbindungsmittel eine wichtige Rolle.

Facade Construction Manual

Walter de Gruyter «Facade Construction Manual» provides a systematic survey of contemporary expertise in the application of new materials and energy-efficient technologies in facade design. It surveys the facade design requirements made by various types of buildings, as well as the most important materials, from natural stone through to synthetics, and documents a diversity of construction forms for a wide range of building types.

Constructing Architecture

Materials, Processes, Structures

Springer Science & Business Media Now in its second edition: the trailblazing introduction and textbook on construction includes a new section on translucent materials and an article on the use of glass.

Construction

Manual

Birkhäuser People involved in architecture need to be familiar with construction methods in order to be in control of their designs. New technical requirements impact on our buildings and call for up-to-date specialist knowledge, which leads to new forms of architecture. This handbook uses clearly comprehensible 3D isometric diagrams to introduce the world of contemporary construction, from concept through to the detail; photographs are used to illustrate the content. The three main chapters deal with the structure, the building envelope, and the fit-out, starting with a clear introduction to the construction principles of modern building methods. Using drawings of selected built examples at scales of 1:10 and 1:20, a deeper examination of details is possible.

Straw Bale Construction Manual

Design and Technology of a Sustainable Architecture

Birkhäuser Building with straw bales is a technique pioneered a century ago in the state of Nebraska. In recent years there has been a renaissance in the use of straw as a building material largely in the American Southwest, but also in Canada, Australia, France, Holland, Germany, Austria and China. Straw is a renewable resource with excellent insulating properties. It is a cheap and easy-to-use option for self-builders, and even large-scale structures can be erected using timber framework filled with straw. This book is a practical, hands-on guide to building with straw. Fire safety, protection against moisture, damp, pests and parasites are treated in detail. Numerous on-site photos document the process of assembly and construction step by step. 30 exemplary international projects illustrate the wide spectrum of design possibilities with straw.

Systems in Timber Engineering

Loadbearing Structures and Component Layers

Springer Science & Business Media An indispensable standard work for everyone involved in building with wood. This work uses plans, schematic drawings, and pictures to show the current and forward-looking state of the technology as applied in Switzerland, a leading country in the field of timber construction.

Old & New

Design Manual for Revitalizing Existing Buildings

Walter de Gruyter Most of the buildings that will be needed in Europe in the coming decades have long since been built. The building tasks of the future lie in the skillful reuse and transformation of existing building stock, whether it be the redevelopment of historic city centers, the building of extensions onto residential structures, the expansion of public buildings, or the redevelopment of entire factory areas. Building in the existing fabric calls for highly specific approaches in planning, construction, and implementation. It spans a broad range of building tasks, from working within the guidelines of historic preservation and renovating carefully and cautiously all the way to the complete transformation of what exists. In addition to aesthetic transformation, technical aspects such as improving energy efficiency and working with contaminated building materials also play an important role. This book provides a comprehensive overview of architectonic strategies of "continuing to build." It presents intelligent ideas and approaches for working with existing building stock and divides them into three categories according to the method selected: addition, transformation, and reuse. Presented in this volume are everyday projects such as the revitalizing of structures from the 1950s to the 1970s – for example, the renovation of Siedlung Heuried in Zurich by Adrian Streich Architekten – but also more specialized examples such as the open-air library made of elements recycled from the façade of a department store in Magdeburg-Salbkke by Karo* Architekten. Interviews with experts provide helpful background information on selected topics.

100 Projects UK CLT

"The benefits of cross-laminated timber (CLT) are clear: building in timber is quick, clean, and easy. It can be achieved with a measured accuracy and lack of noise, waste, or need for material storage space. This book is a study of the 100 of the most significant buildings constructed from CLT in the United Kingdom over the past 15 years. Authors Andrew Waugh and Anthony Thistleton of Waugh Thistleton Architects have contacted a wide range of individuals and businesses to interview them about their experiences building in CLT to help inform this book." -- Thinkwood.com.

Materials for Architects and Builders

Routledge Materials for Architects and Builders provides a clear and concise introduction to the broad range of materials used within the construction industry and covers the essential details of their manufacture, key physical properties, specification and uses. Understanding the basics of materials is a crucial part of undergraduate and diploma construction or architecture-related courses, and this established textbook helps the reader to do just that with the help of colour photographs and clear diagrams throughout. This new edition has been completely revised and updated to include the latest developments in materials research, new images, appropriate technologies and relevant legislation. The ecological effects of building construction and lifetime use remain an important focus, and this new edition includes a wide range of energy saving building components.

Manual of Multi-storey Timber Construction

Detail "Wood is suitable for use in multi-storey building construction with barely any restrictions. This is new and requires creative rethinking of tried and tested practices in wood construction: classical categories can be replaced by mixed construction methods as necessary within a project, which yields completely new possibilities in designing wood structures. The Manual provides architects, engineers and wood specialists with the essential expertise on the new systematic and construction methodology, from the design to prefabrication to the implementation on site. It lays the grounds for mutual understanding among everyone involved in the project, to facilitate the necessary cooperation in the integral planning and construction process." --Publisher.

Building with Earth

Design and Technology of a Sustainable Architecture. Fourth and revised edition

Birkhäuser Earth, in common use for architectural construction for thousands of years, has in the past thirty years attracted renewed attention as a healthy, environment-friendly and economical building material. What needs to be considered in this context? The manual Building with Earth, which has been translated into many languages, describes the building technology of this material. The physical properties and characteristic values are explained in a hands-on manner: With proper moisture protection, earth buildings are very durable, and in particular the combination with wood or straw allows a wide spectrum of design options. Numerous built examples demonstrate the range of applications for this fully recyclable material.

Cultivated Building Materials

Industrialized Natural Resources for Architecture and Construction

Birkhäuser NEXT GENERATION BUILDING MATERIALS The 21st century faces a radical change in how we produce construction materials – a shift towards cultivating, breeding, raising, farming, or growing future resources. This book presents innovative industrialized production methods for cultivated building materials, like cement grown by bacteria, bricks made of mushroom mycelium, or bamboo fibers as reinforcement for concrete. Spanning from scientific research to product development and architectural application, this book builds a bridge between the academic and the professional world of architecture. The book describes the challenges, strategies, and goals in the first part, followed by a second part on bamboo, A cultivated building material and a number of examples in the third part which form the bridge from cultivated materials to building products.

Timber Gridshells

Architecture, Structure and Craft

Taylor & Francis Throughout history, people have constructed simple timber lattice shelters such as the tepee or yurt, covered with animal skins, leaves, grasses and woven fabrics. Over the last fifty years, more sophisticated 'webs of wood' have emerged, with timber gridshells in particular becoming a structurally expressive form of architecture. Recent developments in digital design, 3-D modelling software, timber fabrication technologies as well as trends towards low-carbon construction have further reinforced architects' interest in the use of lightweight timber grids and lattice structures. This timely book charts the origin and evolution of the timber gridshell and its relation to timber lattice architecture. Drawing on a range of international case studies, the authors trace the effect advances in technology have had on design and construction in this field, providing a clear understanding of the structure, morphology, design process, and construction technology, and examining both the application and constraints of timber gridshells in architectural design. Timber Gridshells is a highly illustrated, up-to-date resource which provides detailed answers and inspires new ideas. As such, it is essential reading for students of architecture as well as professional architects.

Flat Roof Construction Manual

Materials, Design, Applications

Walter de Gruyter often described as the "fifth façade", the flat roof is extremely popular with architects. Its essential task is to shelter the space beneath it from the elements. Beyond this, the use of flat roofs may be optimized by integrating them as green roofs, roof terraces, circulation areas, and even productive solar roofs. In practice, however, their correct and professional realization is a highly exacting task: in addition to providing the planner with basic rules of construction and design, the Flat Roof Manual also supplies an overview of the use and construction types as well as the standard assemblies for flat roofs. Together with the most important standards and bodies of regulations, construction drawings of the principal connection points round out the volume.

Architectural Detailing

Function, Constructibility, Aesthetics

John Wiley & Sons The industry-standard guide to designing well-performing buildings Architectural Detailing systematically describes the principles by which good architectural details are designed. Principles are explained in brief, and backed by extensive illustrations that show you how to design details that will not leak water or air, will control the flow of heat and water vapor, will adjust to all kinds of movement, and will be easy to construct. This new third edition has been updated to conform to International Building Code 2012, and incorporates current knowledge about new material and construction technology. Sustainable design issues are integrated where relevant, and the discussion includes reviews of recent built works that extract underlying principles that can be the basis for new patterns or the alteration and addition to existing patterns. Regulatory topics are primarily focused on the US, but touch on other jurisdictions and geographic settings to give you a well-rounded perspective of the art and science of architectural detailing. In guiding a design from idea to reality, architects design a set of details that show how a structure will be put together. Good details are correct, complete, and provide accurate information to a wide variety of users. By demonstrating the use of detail patterns, this book teaches you how to design a building that will perform as well as you intend. Integrate appropriate detailing into your designs Learn the latest in materials, assemblies, and construction methods Incorporate sustainable design principles and current building codes Design buildings that perform well, age gracefully, and look great Architects understand that aesthetics are only a small fraction of good design, and that stability and functionality require a deep understanding of how things come together. Architectural Detailing helps you bring it all together with a well fleshed-out design that communicates accurately at all levels of the construction process.

Construction Manual for Polymers + Membranes

Materials, Semi-finished Products, Form Finding, Design

Walter de Gruyter Whether it be as translucent sheets, broadly stretched membranes, and inflated foil cushions or in graceful, organic curves, architecture today is utilizing plastics in the most disparate forms and for a wide variety of purposes. Innovative technical developments are constantly improving its material properties; at the same time, there is a growing new awareness of its potential as a construction material. While plastics used to be employed primarily as an inexpensive variant on traditional building materials, they are increasingly regarded in the construction world today as a serious and viable alternative, be it as supporting structures, roofs, facades, or elements of interior design and decoration. Thanks in large part to this inherent self-sufficiency, plastics are currently enjoying an unprecedented surge in popularity, even among the international architectural avant-garde – as multiwall sheets or corrugated, fiber-reinforced panels, or as filling between glass panes. And the new generation of ecological bioplastics also pays tribute to the debate on sustainability, ridding plastics of their lingering reputation as environmental offenders. From the history of plastics and membranes in architecture to their material properties and requirements in construction and design, the Plastics and Membranes Construction Manual cuts to the chase, providing the kind of solid and comprehensive overview of the subject that readers have come to expect from the Im DETAIL series. Selected project examples round off the reference work and make it indispensable for the day-to-day life of the professional planner and for every architecture library.

Rethinking Wood

Future Dimensions of Timber Assembly

Birkhäuser Advances in the materials and the digitalization of architecture bring about new methods in design and construction. Whereas traditional timber construction consists of pre-cut and pre-assembled timber sections, modern timber buildings today consist of elaborate wood-based materials. Owing to their flexibility and good properties in terms of building physics and ecology, these wood-based materials are ideal for computer-aided building component production. Fifteen case examples from research, teaching, and practical applications provide inspiring insights into the potential of formable wood-based materials and digital design: Woven Wood, Wood Foam, Living Wood and Organic Joints, Timber Joints for Robotic Building Processes, Efficiencies of Wood, Designing with Tree Form.

Green Oak in Construction

Trada Technology An illustrated technical guide to the use of green oak. It includes eleven case studies demonstrating best practice and inspirational design; provides information on design data and grading rules; features numerous colour photographs and diagrams; and describes the process of green oak construction: the design, framing and enclosing of structures.

Manual of Recycling

Gebäude Als Materialressource / Buildings As Sources of Materials

Detail How is it possible to keep the immense deposits of raw materials in buildings "active" and realise environmentally sustainable buildings in the long term? 0 Besides "sufficiency, consistency and efficiency", this goal implies the intelligent use of resources, the recyclability of structures, circular construction methods that reuse decommissioned materials, in short "urban mining". This requires a rethink in planning and execution, thus posing a great challenge for architects and engineers. 0 The Recycling Manual provides the necessary expertise for the associated paradigm shift in construction. In addition to successful project examples, this comprehensive and detailed guide provides in-depth explanations on calculation methods and tendering aspects.

Timber Engineering

John Wiley & Sons Timber construction is one of the most prevalent methods of constructing buildings in North America and an increasingly significant method of construction in Europe and the rest of the world. Timber Engineering deals not only with the structural aspects of timber construction, structural components, joints and systems based on solid timber and engineered wood products, but also material behaviour and properties on a wood element level. Produced by internationally renowned experts in the field, this book represents the state of the art in research on the understanding of the material behaviour of solid wood and engineered wood products. There is no comparable compendium currently available on the topic - the subjects represented include the most recent phenomena of timber engineering and the newest development of practice-related research. Grouped into three

different sections, 'Basic properties of wood-based structural elements', 'Design aspects on timber structures' and 'Joints and structural assemblies', this book focuses on key issues in the understanding of: timber as a modern engineered construction material with controlled and documented properties the background for design of structural systems based on timber and engineered wood products the background for structural design of joints in structural timber systems Furthermore, this invaluable book contains advanced teaching material for all technical schools and universities involved in timber engineering. It also provides an essential resource for timber engineering students and researchers, as well as practicing structural and civil engineers.

Construction Materials Manual

Walter de Gruyter Until now, the few existing systematic texts on construction materials have primarily been directed at building engineers. An overview for architects, which also considers the importance of construction materials in the sensory perception of architecture—including tactile qualities, smell, color, and surface structure—has not been available. With the publication of the Construction Materials Manual, all that has changed. As a basic work aimed equally at the questions and perspectives of architects and building engineers, it will bring together all of the above-mentioned viewpoints. It addresses fundamental questions of sustainability, including life-span, environmental impact, and material cycles, while also presenting material innovations. All of the principal conventional and innovative construction materials are comprehensively documented, with attention to their production, manufacture, fabrication, treatment, surfaces, connections, and characteristics. International examples help to illustrate their use in architecture, where a building's appearance is often defined by a single material. Thus, the Construction Materials Manual will support the daily work of architects and engineers in the choice of construction materials in a comprehensive and at the same time vivid and stimulating manner.

Floor Plan Manual Housing

Birkhäuser The Floor Plan Manual Housing has for decades been a seminal work in the field of architecture. In its 5th, revised and expanded edition, approximately 160 international housing projects built after 1945 are documented and analyzed. The focus is on exemplary and transferrable projects, and on innovative and trendsetting concepts. The systematic representation of all projects allows the reader to compare and evaluate various floor plans – and to be inspired by the wealth of ideas and strategies for one's own design work. The introductory theoretical and historical essays have been newly written or updated, and offer a structured overview of the residential housing typology and its development.

Understanding Steel Design

An Architectural Design Manual

Walter de Gruyter Understanding Steel Design is based on an overall approach to understand how to design and build with steel from the perspective of its architectural applications. Steel is a material whose qualities have enormous potential for the creation of dynamic architecture. In an innovative approach to the reality of working with steel, the book takes a new look both at the state of tried-and-tested techniques and at emerging projects. Hundreds of steel structures have been observed, analyzed and appraised for this book. In-depth construction photographs by the author are complemented by technical illustrations created to look more closely at systems and details. Drawings supplied by fabricators allow greater insight into a method of working with current digital drawing tools.

Timber Construction

Details, Products, Case Studies

Birkhäuser New materials and stricter energy-efficiency requirements have brought about radical changes in timber construction in recent years. Whether built on site or pre-fabricated, this publication provides a concise survey of modern timber construction, the materials and their applications.

Solid Wood

Case Studies in Mass Timber Architecture, Technology and Design

Routledge Over the past 10-15 years a renaissance in wood architecture has occurred with the development of new wood building systems and design strategies, elevating wood from a predominantly single-family residential idiom to a rival of concrete and steel construction for a variety of building types, including high rises. This new solid wood architecture offers unparalleled environmental as well as construction and aesthetic benefits, and is of growing importance for professionals and academics involved in green design. Solid Wood provides the first detailed book which allows readers to understand new mass timber/massive wood architecture. It provides: historical context in wood architecture from around the world a strong environmental rationale for the use of wood in buildings recent developments in contemporary fire safety and structural issues insights into building code challenges detailed case studies of new large-scale wood building systems on a country-by-country basis. Case studies from the UK, Norway, Sweden, Germany, Austria, Italy, Canada, the United States, New Zealand and Australia highlight design strategies, construction details and unique cultural attitudes in wood design. The case studies include the most ambitious academic, hospitality, industrial, multi-family, and wood office buildings in the world. With discussions from leading architectural, engineering, and material manufacturing firms in Europe, North America and the South Pacific, Solid Wood disrupts preconceived notions and serves as an indispensable guide to twenty-first century wood architecture and its environmental and cultural benefits.

Interiors Construction Manual

Integrated Planning, Finishings and Fitting-Out, Technical Services

Walter de Gruyter Soccer stadiums, airports, theaters, museums – it falls to very few architects to tackle spectacular building tasks like these. The everyday work of most architects is more often focused on "manageable" projects like the renovation, remodeling, or rebuilding of single- and multi-family houses, schools, and offices. Whatever the nature of the building task, interior construction is always a significant design and qualitative challenge that calls for highly detailed technical expertise. After all, it affects the realm that will be brought to life and utilized by the user when the task is finished, and whose aesthetic and functional serviceability will be put to the test each and every day. The Interior Construction Manual supports planners in their daily work as a practical planning aid and reference work with the relevant standards, guidelines, reference details, and constructional solutions, all illustrated by built example projects. It brings together the crucial facts on all aspects of interior construction and presents the key fundamentals of building physics, fire protection, interior construction systems, and openings. In addition, it offers concrete tips on integrated planning approaches, energy and sustainability issues, materials used in interior construction, hazardous substances, and dealing with building services and light planning.

The Whole Building Handbook

How to Design Healthy, Efficient and Sustainable Buildings

Routledge The Whole Building Handbook is a compendium of all the issues and strategies that architects need to understand to design and construct sustainable buildings for a sustainable society. The authors move beyond the current definition of sustainability in architecture, which tends to focus on energy-efficiency, to include guidance for architecture that promotes social cohesion, personal health, renewable energy sources, water and waste recycling systems, permaculture, energy conservation - and crucially, buildings in relation to their place. The authors offer a holistic approach to sustainable architecture and authoritative technical advice, on: * How to design and construct healthy buildings, through choosing suitable materials, healthy service systems, and designing a healthy and comfortable indoor climate, including solutions for avoiding problems with moisture, radon and noise as well as how to facilitate cleaning and maintenance. * How to design and construct buildings that use resources efficiently, where heating and cooling needs and electricity use is minimized and water-saving technologies and garbage recycling technologies are used. * How to 'close' organic waste, sewage, heat and energy cycles. For example, how to design a sewage system that recycles nutrients. * Includes a section on adaptation of buildings to local conditions, looking at how a site must be studied with respect to nature, climate and community structure as well as human activities. The result is a comprehensive, thoroughly illustrated and carefully structured textbook and reference.

Emergent Timber Technologies

Materials, Structures, Engineering, Projects

Birkhäuser The "old" material of wood has been used to construct dwellings of different types since the dawn of mankind. And not without reason. Its low density combined with high rigidity, good processability, and its resistance makes it an excellent building material. There is currently a pioneering renaissance of the timber construction, for two distinct reasons: first, wood is increasingly being rediscovered as one of the most important renewable raw materials for sustainable construction. Moreover, a revolution in the construction of timber structures began several years ago with the ever-progressive use of three-dimensional CAD models for digitally controlled robot manufacturing. The book documents these developments, in particular the engineering bonding techniques, the introduction of digital production techniques, and the innovative material developments of this material. The chapter on composite structures and experimental structures specifically address trends toward the future-oriented dimensions of timber construction. In the final section, outstanding designs are documented in detail, such as the Club House of Haesley Nine Bridges Golf Course designed by Shigeru Ban in Yeosu, South Korea, and the double gymnasium in Borex-Crassier, Switzerland, by Graeme Mann and Patricia Capua Mann.

Bio-based Building Skin

Springer This book provides a compendium of material properties, demonstrates several successful examples of bio-based materials' application in building facades, and offers ideas for new designs and novel solutions. It features a state-of-the-art review, addresses the latest trends in material selection, assembling systems, and innovative functions of facades in detail. Selected case studies on buildings from diverse locations are subsequently presented to demonstrate the successful implementation of various biomaterial solutions, which defines unique architectural styles and building functions. The structures, morphologies and aesthetic impressions related to bio-based building facades are discussed from the perspective of art and innovation; essential factors influencing the performance of materials with respect to functionality and safety are also presented. Special emphasis is placed on assessing the performance of a given facade throughout the service life of a building, and after its end. The book not only provides an excellent source of technical and scientific information, but also contributes to public awareness by demonstrating the benefits to be gained from the proper use of bio-based materials in facades. As such, it will appeal to a broad audience including architects, engineers, designers and building contractors.

Integral Mechanical Attachment

A Resurgence of the Oldest Method of Joining

Elsevier Integral Mechanical Attachment, highlights on one of the world's oldest technologies and makes it new again. Think of buttons and toggles updated to innovative snaps, hooks, and interlocking industrial parts. Mechanical fasteners have been around as long as mankind, but manufacturers of late have been re-discovering their quick, efficient and fail proof advantages when using them as interlocking individual components as compared with such traditional means of joining materials like welding, soldering, gluing and using nuts bolts, rivets and other similar devices. For many years, it has been virtually impossible to find a single-source reference that provides an overview of the various categories of fastening systems and their various applications. Design engineers should find this book to be an invaluable source of detailed, illustrated information on how such fasteners work, and how they can save time and money. Students, too, will find this book to be extremely useful for courses in mechanical design, machine design, product development and other related areas where fastening and joining subjects are taught. This will be the first reference book to come along in many years that will fully illustrate the major classes of integral mechanical fasteners, replete with examples of typical assembly and ideas and suggestions for further research. * Covers all major techniques for integral mechanical attachment within the context of other types of joining including chemical (adhesive) bonding, melting and solidification (welding, soldering, brazing), and mechanical joining (fasteners and part features) * Includes specific chapters for particular attachment considerations by materials type, including metals, plastics, ceramics, glass, wood, and masonry * Provides unique coverage of mechanical/electrical connections for reliable contact and use

Turning Point in Timber Construction

A New Economy

Birkhäuser Faced with man-made climate change and the need to provide housing for a growing world population, society needs to rethink the way future buildings are made. Wood is a truly renewable building material that is unlimited in supply if its growth and harvest are sustainably managed. Recent technological advancements in engineering allow the use of timber for the construction of multi-story structures, turning our buildings into carbon sinks rather than becoming sources for CO2-emissions. The book presents convincing arguments for the increased use of wood as an alternative to more fossil fuel intensive building materials, with the goal of demonstrating that an integrated approach can have the potential for positive impact on the environment, local economies, and the building culture at large.

Basics Timber Construction

Birkhäuser Together with masonry construction, timber construction is usually one of the first building exercises encountered by the student in his or her training. This volume begins by presenting the building material timber in all of its facets and explaining the fundamental principles of timber construction. It then goes on to describe the most important building components and their constructive possibilities, specifically as they pertain to building with timber. Subjects: Timber as building material, Timber preservation, Systems for building with timber, Building components from foundation to roof.

Timber Bridges

Routledge Bridges built in timber are enjoying a significant revival, both for pedestrian and light traffic and increasingly for heavier loadings and longer spans. Timber's high strength-to-weight ratio, combined with the ease and speed of construction inherent in the off-site prefabrication methods used, make a timber bridge a suitable option in many different scenarios. This handbook gives technical guidance on forms, materials, structural design and construction techniques suitable for both small and large timber bridges. Eurocode 5 Part Two (BS EN 1995-2) for the first time provides an international standard for the construction of timber bridges, removing a potential obstacle for engineers where timber construction for bridges has not – in recent centuries at least – been usual. Clearly illustrated throughout, this guide explains how to make use of this oldest construction material in a modern context to create sustainable, aesthetically pleasing, practical and durable bridges. Worldwide examples include Tourand Creek Bridge, Canada; Toijala, Finland; Punt la Resgia, Switzerland; Pont de Crest, France; Almorere Pylon Bridge, the Netherlands.

The Case for Tall Wood Buildings

Second Edition

Blurb This book describes a new structural system in wood that represents the first significant challenge to concrete and steel structures since their inception in tall building design more than a century ago. The introduction of these ideas is driven by the need to find safe, carbon-neutral and sustainable alternatives to the incumbent structural materials of the urban world. The potential market for these ideas is quite simply enormous. The proposed solutions have the potential to revolutionize the building industry, address the major challenges of climate change, urbanization, and sustainable development and to significantly contribute to world housing needs.

Living for the Elderly

A Design Manual

Birkhäuser "Quality living in old age is one of the key topics of our time. This book presents innovative forms of living, intelligent concepts and individual solutions for people with physical or cognitive limitations. Integrative forms of housing transcending the boundaries between individual, collective and assisted forms of living. The updated new edition includes new current international case studies on integrated housing and neighbourhood concepts"--

Light Earth Building

A Handbook for Building with Wood and Earth

Birkhäuser The interest in clay as a building material – which has proved its sustainable characteristics over centuries – is growing. Light clay, which is light in weight and easy to work, is presented here as a versatile and forward-looking building material for modern computer-aided timber construction and the renewal of historic timber-framed buildings with clay infill. The balanced building physics properties of the material, which can be controlled through the mixing proportions, make it suitable for resource-efficient building in various different climate zones. Thermal storage, sound insulation, protection against moisture and fire in conventional timber construction are improved, and the construction is simplified. This standard publication describes detailed production methods, includes practical tips for self-building, and demonstrates the application of ready-made materials in modern construction. The book is aimed at architects, engineers, and their clients, as well as for listed building officers, manufacturers, tradesmen and self-builders

Roof Construction Manual

Pitched Roofs

Birkhäuser "This book is a vital reference work on the construction of pitched roofs. It offers extensive and fundamental information on all common types of roofing, and provides practical details for their construction"--BOOKJACKET.

Town Houses

A Housing Typology

Walter de Gruyter To continue to develop existing building types and do so in an intelligent way is one of the crucial tasks in the field of residential building. For the success of the individual design as well as for ensuring that tried and tested structures can be utilized, repeated, and varied in a wide range of situations, a deeper understanding of the underlying types is indispensable. For this typology of residential buildings, the authors have developed systematic new presentations of the most innovative types. Each individual volume lays out the possibilities for using and transforming a particular form of residential structure. The third volume deals with the types of the townhouse. It will address the following topics among others: single- versus multistory construction, density, privacy versus publicity, and the connection of living and working. Within each type, variants are distinguished according to how they organize space, their number of floors, etc. The range of possible solutions is presented in uniform ground plans newly drawn to scale.

Hemp Lime Construction

A Guide to Building with Hemp Lime Composites

Building Research Establishment Comprehensive guidance on using hemp lime for housing and low-rise buildings is given for the first time in this book, which is full of practical information on materials, design and construction.

Living Systems

Innovative Materials and Technologies for Landscape Architecture

Springer Science & Business Media The use of innovative new materials is an important trend in landscape architecture today. These materials include biodegradable geotextiles, super-absorbent polymers, and plants that react to changing soil conditions. This book presents the available materials and technologies in the context of practical applications.