

## Designing And Building Mini And Micro Hydro Power Schemes A Practical Guide

This book examines alternative design procedures for plain and piled raft foundations. It explores the assumptions that are made in the analysis of soil - structure interaction, together with the associated calculation methods. The book gives many examples of project applications covering a wide range of structural forms and ground conditions.

A real-world action plan for educators to create personalized learning experiences Learning Personalized: The Evolution of the Contemporary Classroom provides teachers, administrators, and educational leaders with a clear and practical guide to personalized learning. Written by respected teachers and leading educational consultants Allison Zmuda, Greg Curtis, and Diane Ullman, this comprehensive resource explores what personalized learning looks like, how it changes the roles and responsibilities of every stakeholder, and why it inspires innovation. The authors explain that, in order to create highly effective personalized learning experiences, a new instructional design is required that is based loosely on the traditional model of apprenticeship: learning by doing. Learning Personalized challenges educators to rethink the fundamental principles of schooling that honors students' natural willingness to play, problem solve, fail, re-imagine, and share. This groundbreaking resource: Explores the elements of personalized learning and offers a framework to achieve it Provides a roadmap for enrolling relevant stakeholders to create a personalized learning vision and reimagine new roles and responsibilities Addresses needs and provides guidance specific to the job descriptions of various types of educators, administrators, and other staff This invaluable educational resource explores a simple framework for personalized learning: co-creation, feedback, sharing, and learning that is as powerful for a teacher to re-examine classroom practice as it is for a curriculum director to reexamine the structure of courses.

This open access book details the relationship between the artist and their created works, using tools such as information technology, computer environments, and interactive devices, for a range of information sources and application domains. This has produced new kinds of created works which can be viewed, explored, and interacted with, either as an installation or via a virtual environment such as the Internet. These processes generate new dimensions of understanding and experience for both the artist and the public's relationships with the works that are produced. This has raised a variety of interdisciplinary opportunities and issues, and these are examined. The symbiotic relationship between artistic works and the cultural context in which they are produced is reviewed. Technology can provide continuity by making traditional methods and techniques more efficient and effective. It can also provide discontinuity by opening up new perspectives and paradigms. This can generate new ideas, and produce a greater understanding of artistic processes and how they are implemented in practice. Tools have been used from the earliest times to create and modify artistic works. For example, naturally occurring pigments have been used for cave paintings. What has been created provides insight into the cultural context and social environment at the time of creation. There is an interplay between the goal of the creator, the selection and use of appropriate tools, and the materials and representations chosen. Technology, Design and the Arts - Opportunities and Challenges is relevant for artists and technologists and those engaged in interdisciplinary research and development at the boundaries between these disciplines.

Addresses the Question Frequently Proposed to the Designer by Architects: "Can We Do This? Offering guidance on how to use code-based procedures while at the same time providing an understanding of why provisions are necessary, Tall Building Design: Steel, Concrete, and Composite Systems methodically explores the structural behavior of steel, concrete, and composite members and systems. This text establishes the notion that design is a creative process, and not just an execution of framing proposals. It cultivates imaginative approaches by presenting examples specifically related to essential building codes and standards. Tying together precision and accuracy—it also bridges the gap between two design approaches—one based on initiative skill and the other based on computer skill. The book explains loads and load combinations typically used in building design, explores methods for determining design wind loads using the provisions of ASCE 7-10, and examines wind tunnel procedures. It defines conceptual seismic design, as the avoidance or minimization of problems created by the effects of seismic excitation. It introduces the concept of performance-based design (PBD). It also addresses serviceability considerations, prediction of tall building motions, damping devices, seismic isolation, blast-resistant design, and progressive collapse. The final chapters explain gravity and lateral systems for steel, concrete, and composite buildings. The Book Also Considers: Preliminary analysis and design techniques The structural rehabilitation of seismically vulnerable steel and concrete buildings Design differences between code-sponsored approaches The concept of ductility trade-off for strength Tall Building Design: Steel, Concrete, and Composite Systems is a structural design guide and reference for practicing engineers and educators, as well as recent graduates entering the structural engineering profession. This text examines all major concrete, steel, and composite building systems, and uses the most up-to-date building codes.

Energy Conservation in the Design of Multi-Storey Buildings documents the papers presented at an International Symposium held at The University of Sydney, 1-3 June 1983, sponsored by The University of Sydney, the International Association for Bridge and Structural Engineering, the Council for Tall Buildings and Urban Habitat, and the Institution of Engineers Australia. The volume contains 13 papers organized into two parts. Part I deals with predictive methods. It includes papers that describe the design of Australian projects where energy was a major issue; examine energy conservative building design from the standpoints of New York and Singapore; present a design tool for estimating energy consumption and costs; and consider limitations in the application of computers to the design of the air conditioning plant. Part II is devoted to energy management. The papers survey energy management in Australian office buildings and hospitals; describe energy audits in the United States; and discusses methods for the computer control of energy systems.

Home Building for the Wise Woman: A Blueprint for Designing a Life That Fits. Seven lessons for group or individual study. Do you feel like a failure next to your best friend who works part-time, helps out at school, and has a perfectly clean house and a husband who's always smiling; while you feel like you're drowning if you have to make cookies for the bake sale? Do you find yourself asking, "Did I choose the wrong priority? After all, aren't the kids more important than . . .?" Do you wish you could just be you? Through Home Building for the Wise Woman, you will develop a personalized blueprint that will help you: visualize your priorities, make wise decisions, defeat guilt, and build the beautiful life God created you to live—a life that fits!

"I began building tiny houses back in 2009 when I built one for my mom. The house she was living in was starting to fall apart and become unlivable, so I knew I had to find her alternative housing. After researching various options I discovered the tiny house movement and realized that it was the perfect solution for her. A tiny house could be constructed to very high standards and still be affordable, plus it can be easily moved"--Author

Make your own tiny houses! This kit includes instructions and materials to build a trailer base and 3 different tiny houses out of cardstock paper. Each of the tiny houses has a unique roof design and exterior features, including sliding doors, a deck, stairs, a gabled roof, and a pop-out extension room You will also make interior walls, fixtures, and furniture for one house. Once you've learned the basics, you can branch out to designing and building your own tiny houses and furniture! Extra building materials such as walls, windows, doors, cabinets, sinks, stoves, and acetate to cover windows 24-page instruction booklet

Live large by building small! Do you daydream about downsizing your living space? Or perhaps you long for a more eco-friendly and sustainable way of life. The tiny house movement continues to gain popularity as more and more people look to simplify their lives and reconnect with nature. Building Small is your key to joining the tiny house revolution with designs for homes as well as a range of backyard buildings including workspaces and sheds. There's tons of practical

how-to construction advice including best practices, common pitfalls and tips for the do-it-yourself carpenter. Within these pages you'll find:

- Complete plans for seven tiny houses
- Strategies for outfitting your tiny house with lighting, water, heating and waste removal
- Ideas for floor layout and interior design
- Success stories and inspirational photos of tiny homes

Whether you're considering a timber-framed cottage or a modular cube-style home, Building Small offers a wide range of approaches for planning and building your small structure.

Contextual Design: Design for Life, Second Edition, describes the core techniques needed to deliberately produce a compelling user experience. Contextual design was first invented in 1988 to drive a deep understanding of the user into the design process. It has been used in a wide variety of industries and taught in universities all over the world. Until now, the basic CD approach has needed little revision, but with the wide adoption of handheld devices, especially smartphones, the way technology is integrated into people's lives has fundamentally changed. Contextual Design V2.0 introduces both the classic CD techniques and the new techniques needed to "design for life", fulfilling core human motives while supporting activities. This completely updated and revised edition is written in a clear, informal style without excessive jargon, and is the must-have book for any UX Design library. Users will find coverage of mobile devices and consumer and business products, all illustrated with new examples, case studies, and discussions on how to use CD with the agile development and other project requirements methods. Provides tactics on how to gather detailed data on how people live, work, and use products Helps develop a coherent picture of a whole user population Presents tactics on how to use the seven "Cool Concepts" to support core human motives and generate new product concepts guided by user data, ideation techniques, and principles key to producing a compelling user experience Explains how to structure the system and user interface to best support the user across place, time, and platform

In the Design Professional's Guide to Zero Net Energy Buildings, Charles Eley draws from over 40 years of his own experience, and interviews with other industry experts, to lay out the principles for achieving zero net energy (ZNE) buildings, which produce as much energy as they use over the course of a year. Eley emphasizes the importance of building energy use in achieving a sustainable future; describes how building energy use can be minimized through smart design and energy efficiency technologies; and presents practical information on how to incorporate renewable energy technologies to meet the lowered energy needs. The book shows the reader through examples and explanations that these solutions are viable and cost effective.

Design today is a global instrument. Bernhard Bürdek traces the progress of design from its beginnings in the late 19th century, through the most significant movements of the 20th century up to those recent developments in biological engineering which will shape the 21st century. Design is now a discipline in its own right and its expertise can be incorporated within interdisciplinary processes. The most important fundamental principles of design theory and methodology are presented, looking in particular at the communicative function of products and highlighting aspects such as corporate and service design, design management, strategic design, interface/interaction design and human design. Introductory technical guidance for professional engineers interested in antiterrorism assumptions for building design. Here is what is discussed: 1. ASSUMPTIONS 2. BASELINE THREAT 3. CONTROLLED PERIMETERS AND ACCESS CONTROL 4. LEVELS OF PROTECTION 5. APPLICABLE EXPLOSIVE WEIGHT 6. STANDOFF DISTANCES 7. UNOBSTRUCTED SPACE 8. BUILDING OCCUPANCY LEVELS 9. LAMINATED GLASS AND POLYCARBONATE 10. EXEMPTED BUILDING TYPES 11. POLICIES AND PROCEDURES.

The practice of universal design—of making a product or environment accessible to all individuals—has been around for a long time. But, until now, that practice has never been explored in depth in the field of physical education. This groundbreaking text provides a much-needed link between universal design and physical education, extending boundaries as it offers physical educators a systematic guide to create, administer, manage, assess, and apply universal design for learning (UDL). Universal Design for Learning in Physical Education is for all physical educators—those who are or are preparing to become general PE teachers as well as those who are in the field of adapted physical education. This resource offers the following: Ready-to-use curricular units for grades K-12, with 31 universally designed lessons that demonstrate how teachers can apply UDL in specific content areas (teachers can also use those examples to build their own units and lessons) Rubrics for the 28 items on the Lieberman–Brian Inclusion Rating Scale for Physical Education (LIRSPE) to help teachers follow best practices in inclusion Tables, timelines, and paraeducator training checklists to ensure that UDL is effectively delivered from the beginning of the school year In her earlier text, Strategies for Inclusion, Third Edition, coauthor Lauren Lieberman included a valuable chapter about UDL that focused on detailed, practical steps for making classes inclusive. Universal Design for Learning in Physical Education approaches inclusion from the macro level, providing a comprehensive conceptual model of UDL and how to incorporate it into curriculum planning and teaching methods for K-12 physical education. Outcomes for Universal Design for Learning in Physical Education are aligned with SHAPE America's physical education standards and grade-level outcomes. Given that 94 percent of students with disabilities are taught in physical education settings, this text offers highly valuable guidance to general physical educators in providing equal access to, and engagement in, high-quality physical education for all students. Part I of Universal Design for Learning in Physical Education defines universal design and explains how it relates to physical education. It identifies barriers that teachers may face in adapting UDL to their programs and how to overcome these barriers. It also addresses critical assessment issues and guides teachers in supporting students with severe or multiple disabilities. Part I also covers advocacy issues such as how to teach students to speak up for their own needs and choices. Readers will gain insight into where their programs excel and where barriers might still exist when they employ the Lieberman–Brian Inclusion Rating Scale, a self-assessment tool that helps measure physical, programmatic, and social inclusion. Finally, part I reinforces several UDL principles by sharing many examples of how physical educators have applied UDL in their programs. Part II offers a trove of universally designed units and lesson

plans for use across grades K-12, with separate chapters on lessons for elementary, sports, fitness, recreation, and aquatics. Universal Design for Learning in Physical Education is the first text to delve deeply into the concept of universal design in physical education. As such, it is a valuable resource for all PE teachers—both those leading general classes and adapted classes—to learn how to successfully implement universally designed units and lesson plans that enrich all their students' lives. The accompanying web resource provides 40 forms, tables, checklists, and a sample lesson plan from the book, as well as a list of websites, books, and laws. These resources are provided as reproducible PDFs for practical use.

This book provides a comprehensive guide to the design of foundations for tall buildings. After a general review of the characteristics of tall buildings, various foundation options are discussed followed by the general principles of foundation design as applied to tall buildings. Considerable attention is paid to the methods of assessment of the geotechnical design parameters, as this is a critical component of the design process. A detailed treatment is then given to foundation design for various conditions, including ultimate stability, serviceability, ground movements, dynamic loadings and seismic loadings. Basement wall design is also addressed. The last part of the book deals with pile load testing and foundation performance measurement, and finally, the description of a number of case histories. A feature of the book is the emphasis it places on the various stages of foundation design: preliminary, detailed and final, and the presentation of a number of relevant methods of design associated with each stage.

UX Design and Usability Mentor Book includes best practices and real-life examples in a broad range of topics like: UX design techniques Usability testing techniques such as eye-tracking User interface design guidelines Mobile UX design principles Prototyping Lean product development with agile vs. waterfall Use cases User profiling Personas Interaction design Information architecture Content writing Card sorting Mind-mapping Wireframes Automation tools Customer experience evaluation The book includes real-life experiences to help readers apply these best practices in their own organizations. UX Design and Usability Mentor Book is an extension of best-selling Business Analyst's Mentor Book. Thanks to the integrated business analysis and UX design methodology it presents, the book can be used as a guideline to create user interfaces that are both functional and usable.

An exploration of the world of concrete as it applies to the construction of buildings, Reinforced Concrete Design of Tall Buildings provides a practical perspective on all aspects of reinforced concrete used in the design of structures, with particular focus on tall and ultra-tall buildings. Written by Dr. Bungale S. Taranath, this work explains the fundamental principles and state-of-the-art technologies required to build vertical structures as sound as they are eloquent. Dozens of cases studies of tall buildings throughout the world, many designed by Dr. Taranath, provide in-depth insight on why and how specific structural system choices are made. The book bridges the gap between two approaches: one based on intuitive skills and experience and the other based on computer skills and analytical techniques. Examining the results when experiential intuition marries unfathomable precision, this book discusses: The latest building codes, including ASCE/SEI 7-05, IBC-06/09, ACI 318-05/08, and ASCE/SEI 41-06 Recent developments in studies of seismic vulnerability and retrofit design Earthquake hazard mitigation technology, including seismic base isolation, passive energy dissipation, and damping systems Lateral bracing concepts and gravity-resisting systems Performance based design trends Dynamic response spectrum and equivalent lateral load procedures Using realistic examples throughout, Dr. Taranath shows how to create sound, cost-efficient high rise structures. His lucid and thorough explanations provide the tools required to derive systems that gracefully resist the battering forces of nature while addressing the specific needs of building owners, developers, and architects. The book is packed with broad-ranging material from fundamental principles to the state-of-the-art technologies and includes techniques thoroughly developed to be highly adaptable. Offering complete guidance, instructive examples, and color illustrations, the author develops several approaches for designing tall buildings. He demonstrates the benefits of blending imaginative problem solving and rational analysis for creating better structural systems.

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Laxton's gives you access to the most reliable and current data. All 250,000 price elements have been individually checked and updated for the 2002 edition so that your estimates are always accurate and cost competitive. Laxton's makes analytical estimating simple and straightforward by displaying a complete breakdown for all measured items under 10 separate headings, all on a single page. This shows you a complete price build-up at a glance - and gives you the option to make price adjustments wherever necessary. You can find the sections you need quickly and easily, via the special marker system on the front cover and page edges. The free CD with this price book contains Masterbill's ESTIMATOR software and fully resourced data on all the price elements in Laxton's. Not only does the CD offer fast and efficient pricing at the touch of a button, it gives details of all the resources required to do the job. Laxton's approximate estimating section gives all in pricing for quick reference on the cost of composite items such as floors helping you calculate the cost implications of using plywood sheeting rather than softwood boarding, for example. Laxton's Basic Price section gives you a quick price on hundreds of items - from concrete work to roofing materials - to save you going through hundreds of lists from suppliers, manufacturers and building merchants. Laxton's Brand and Trade Names section lists over 12,000 brands and trade names and company addresses to help you locate specific items. Latest wage rates, fees and allowances All 250,000 price elements checked and updated

Support whatever your kids' interests are. This one's for the future designers of all time. This book contains the present and the future of the fashion design industry with inspirations taken from only the world renowned designers. Your kids will definitely appreciate your full support in their passion when you buy this for them. Get a copy today.

Building America's First University tells the story of the University of Pennsylvania, a story that begins with Benjamin Franklin's transcendent notion that learning ought not to be restricted to a leading religion or class. Rather than looking back toward antiquarian knowledge, Franklin set his college's course toward the world of the present and the future by focusing on modern languages, the natural sciences, and contemporary literature. His goals were soon reflected in the addition of a course in medicine, the first in the New World, and, by the end of the century, a course in law. This broader definition of education was celebrated after the American Revolution when the College was renamed the University of Pennsylvania, the first American institution to carry that all-encompassing title. In the intervening centuries, Franklin's vision has become the model of American higher education. Since its founding the University has adapted to reflect the values of the community that has supported it,

charting a course between innovation and convention. These changes are evident in the architecture and character of the three campuses that have been its home. From Franklin's adaptation of a nonsectarian chapel as the institution's first quarters to Frank Furness's innovative University Library and Louis Kahn's momentous Richards Medical Research Laboratory, Penn's buildings can be seen as illuminating the evolving intentions of the University's leaders. Written by architectural historians George E. Thomas and David B. Brownlee, *Building America's First University* uses the physical evidence of Penn's campuses and buildings to illustrate the development of this landmark institution in American education. Part 1 recounts the history of the University, with three of the five chapters devoted to the evolution of the current campus. The historical chapters weave together the often conflicting interests and goals of trustees, administrators, alumni, and students that have shaped the institution of today. Part 2 presents a gazetteer to the campus in its present form--two hundred and fifty years after Benjamin Franklin wrote his "Proposals for the Education of Youth in Pensilvania." Here the authors describe every significant building on campus, with at least one photograph of each. Coming at the end of forty years of massive growth, this is the first comprehensive architectural history of the University since the early twentieth century.

Partnering is a set of strategic actions that deliver vast improvements in construction performance. It is driven by a clear understanding of mutual objectives and cooperative decision making by a number of firms, who are all focused on using feedback to continuously improve their joint performance. A 'second generation' of Partnering has now emerged that requires a strategic decision to cooperate in improving joint performance by a client and a group of consultants, contractors and specialists engaged in an ongoing series of projects. Second Generation Partnering is underpinned by 'Seven Pillars'. Each pillar represents a set of management actions that provide an essential element of Second Generation Partnering. The research also identifies the beginnings of a third generation of Partnering in which the construction industry becomes a truly modern industry producing and marketing a range of products and services that clients are eager to invest in. The dramatic improvements in performance delivered by Second and Third Generation Partnering enable construction firms to meet the demands of their customers - whether they need greater certainty, better designs, faster delivery, lower costs, zero defects, guarantees or sophisticated after-care services.

The main aim of this book is to present an intriguing retrospective of Building Performance Evaluation (BPE) as it evolved from Post-Occupancy Evaluation (POE) over the past 25 years. On one hand, this is done by updating original authors' chapter content of *Building Evaluation*, the first edition published in 1989. That, in turn, is augmented by an orientation toward current and future practice on the other, including new authors who are engaged in ongoing, cutting edge projects. Therefore, individual, methodology oriented chapters covering the fundamental principles of POE and BPE go along with major thematic chapters, topics of which like sustainability or integration of new technologies are addressed in a diversity of case studies from around the globe. Research, methodologies, and framework of POEs continue to evolve. POEs are one step, on the larger scale of BPE, in understanding how buildings function after they are occupied. This resource helps architects, building owners, and facility managers understand the implications and reactions to the facilities that they designed, built and/or commissioned. By considering the whole process from conception to future uses of the building, there can be a more holistic approach to the planning, programming, design, construction, occupancy, and future adaptability of the structure. This book is dedicated to first editor Wolfgang F. E. Preiser who passed away during the process of editing and reviewing chapters of this volume.

The automobile seems to be as popular now as it ever was. Posters of cars still adorn many a child's bedroom wall, and school exercise books are full of doodles of cars. This book takes those notebook sketches and teaches you how to develop them into the car designs you see in magazines. Using simple to follow step-by-step drawings it guides you from pencil sketch to marker rendering, from doodle to highly visual computer generated artwork. Adrian Dewey has worked on designs as diverse as small sports cars to double decker buses, modified motors to concept Formula 1 cars, using various techniques and styles. In this book, he uses his knowledge of the different styles to guide the reader in creating great artwork and designs of their own. The book shows in detail how to use different materials and how to get the most out of each one, whether it be a great pencil sketch or a photo realistic vector illustration. The book also features an easy to follow index for quick reference on different types of drawing. *The Blue Economy* cites a new business model in China where novel paper production turns crushed rocks, including mining waste that has piled up over centuries into sheets for printing, writing and packaging without the use of water, without cutting down a tree, and recyclable forever. It details how thistles, considered a weed, is turned into a plastic, a lubricant and a herbicide converting an old petrochemical plant into a biorefinery.

Design has now become an important research topic in engineering and architecture. Design is one of the keystones to economic competitiveness and the fundamental precursor to manufacturing. The development of computational models founded on the artificial intelligence paradigm has provided an impetus for current design research. This volume contains contributions from the Second International Conference on Artificial Intelligence in Design held in June 1992 in Pittsburgh. They represent the state-of-the-art and the cutting edge of research and development in this field. They are of particular interest to researchers, developers and users of computer systems in design. This volume demonstrates both the breadth and depth of artificial intelligence in design and points the way forward for our understanding of design as a process and for the development of computer-based tools to aid designers.

Across the realms of multimedia production, information design, web development, and usability, certain truisms are apparent. Like an *Art of War* for design, this slim volume contains guidance, inspiration, and reassurance for all those who labor with the user in mind. If you work on the web, in print, or in film or video, this book can help. If you know someone working on the creative arena, this makes a great gift. Funny, too.

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

The prize-winning landscape quilter shares easy tips and time-saving techniques in this guide featuring mini-landscape quilts for all skill levels. In Quick Little Landscape Quilts, Joyce Becker shows you simple ways to work with landscape-themed fabrics to make a quilted wallhanging you'll be proud to show off. This skill-building guide covers a variety of techniques, such as incorporating overlays for perspective; embellishing with machine embroidery; and enhancing designs with inks, pastels, and more. Featured projects range from simple patterns to photo-based designs. Key ideas in programming language design and implementation explained using a simple and concise framework; a comprehensive introduction suitable for use as a textbook or a reference for researchers. Hundreds of programming languages are in use today—scripting languages for Internet commerce, user interface programming tools, spreadsheet macros, page format specification languages, and many others. Designing a programming language is a metaprogramming activity that bears certain similarities to programming in a regular language, with clarity and simplicity even more important than in ordinary programming. This comprehensive text uses a simple and concise framework to teach key ideas in programming language design and implementation. The book's unique approach is based on a family of syntactically simple pedagogical languages that allow students to explore programming language concepts systematically. It takes as premise and starting point the idea that when language behaviors become incredibly complex, the description of the behaviors must be incredibly simple. The book presents a set of tools (a mathematical metalanguage, abstract syntax, operational and denotational semantics) and uses it to explore a comprehensive set of programming language design dimensions, including dynamic semantics (naming, state, control, data), static semantics (types, type reconstruction, polymorphism, effects), and pragmatics (compilation, garbage collection). The many examples and exercises offer students opportunities to apply the foundational ideas explained in the text. Specialized topics and code that implements many of the algorithms and compilation methods in the book can be found on the book's Web site, along with such additional material as a section on concurrency and proofs of the theorems in the text. The book is suitable as a text for an introductory graduate or advanced undergraduate programming languages course; it can also serve as a reference for researchers and practitioners.

Your hands-on, practical guide to the materials and construction methods of green building Want to build responsibly and help preserve the environment? This friendly, step-by-step guide introduces you to key facets of green building and remodeling, from looking at long-term costs to working with green professionals to reducing energy and water use. Open the book and find: The benefits of going green Green material substitutions Where to locate green professionals Ten green things you can do in your home today

Originating from their work at Cambridge University on the design of energy efficient homes in Northern Europe, the authors consider the site constructions, building designs, available renewable energy sources, and servicing systems in different types of low energy houses.

Despite recent improvements in energy efficiency being made in new build, it is important that the existing commercial building sector also take action to meet emission reduction targets. The objectives and challenges of such action will reduce the risk of the sector becoming obsolete due to high energy use and poor environmental performance. This book presents a theory-based, practice-support methodology to deal with sustainable retrofitting opportunities for existing commercial buildings in warm climates using bioclimatic design as the basis. The book has four main parts, focusing on eco-design and renovation, bioclimatic retrofitting, technological and behavioural change and case studies of retrofitting exemplars. In the first part, the context of climate change effects on design and renovation at the city scale is discussed. The second part looks at bioclimatic retrofitting as a 'design guide' for existing buildings, highlighting the significance of architectural design and engineering systems for energy performance. The technological and behavioural contexts of the existing building sector – policies, modelling, monitoring and trend analysis in respect to energy and environmental performance – are covered in part three. The final part gives some case studies showing the effectiveness of strategies suggested for effective environmental performance. This book is a must-have guide for all involved in the design and engineering of retrofitting projects in warm climates.

Volume 2 of History of Construction Cultures contains papers presented at the 7ICCH – Seventh International Congress on Construction History, held at the Lisbon School of Architecture, Portugal, from 12 to 16 July, 2021. The conference has been organized by the Lisbon School of Architecture (FAUL), NOVA School of Social Sciences and Humanities, the Portuguese Society for Construction History Studies and the University of the Azores. The contributions cover the wide interdisciplinary spectrum of Construction History and consist on the most recent advances in theory and practical case

studies analysis, following themes such as: - epistemological issues; - building actors; - building materials; - building machines, tools and equipment; - construction processes; - building services and techniques ; -structural theory and analysis ; - political, social and economic aspects; - knowledge transfer and cultural translation of construction cultures. Furthermore, papers presented at thematic sessions aim at covering important problematics, historical periods and different regions of the globe, opening new directions for Construction History research. We are what we build and how we build; thus, the study of Construction History is now more than ever at the centre of current debates as to the shape of a sustainable future for humankind. Therefore, History of Construction Cultures is a critical and indispensable work to expand our understanding of the ways in which everyday building activities have been perceived and experienced in different cultures, from ancient times to our century and all over the world.

This is a reproduction of a book published in 1922. The book may have occasional imperfections such as poor pictures. But despite this it must be republished as it is culturally important. CONTENTS: TEACHING ELEMENTARY BINDING THE REPAIR OF SCHOOL BOOKS HOW TO OPEN A NEW BOOK BOOK REPAIRING NEW BACKS TO BOOKS COVER MAKING FIRST STEP IN COVER MAKING TO PREPARE YOUR BOOK FOR COVER THE CARE OF BOOKS LABELING BOOKS SEWING BOOKS BINDERS' BOARDS GLUE AND PASTE PROPER USE OF TAPES STAPLES BINDER'S CLOTH AND IMITATION LEATHER TOOLS AND SUPPLIES ORIGIN OF THE BOOK TECHNICAL TERMS IN BINDING

People across the world are becoming more aware of the need for the buildings and cities they live and work in to be sustainable, but the issue of how to be sustainable can seem a confusing and complex one. These rules of thumb provide universal guidelines for the sustainable design of both buildings and the urban realm. It's a global primer and textbook for anyone interested in understanding sustainability in the built environment, an ideal starting point for students as well as an aide memoir for more experienced readers and practitioners interested in this field.

Small hydro power installations have the potential to provide a renewable supply of energy to people in remote, hilly communities, far from the national grid. This book is based on the authors' considerable experience of installing hydroelectric schemes that produce up to 500 kW for powering small communities. It describes not only the electro-mechanical equipment and how it is installed, but also the correct siting of the installation and how to design and build the channels leading up to the turbine so as to optimize performance. These civil works can be carried out by local manpower, using materials that are usually available locally. Chapters cover the main components of small hydroelectric plants from the intake and the headrace channel, via the conveyance channel, to the forebay tank, penstock, turbine, and generator. Designing and Building Mini and Micro Hydropower Schemes is essential reading for engineers, NGO managers and consultants planning and implementing micro hydro schemes. 'This book's strength is that it is based on years of experience out in the field of designing micro hydro systems that work.' Dr Arthur Williams, School of Electrical Electronic Engineering, The University of Nottingham, UK 'For remote communities lucky enough to live near hill streams or rivers, micro-hydro power is the most cost effective way of generating electricity. And it is clean energy. But it takes years of experience and skill to design the weirs, canals and spillways that are needed. Experienced practitioners take you through the whole design process, with drawings and calculations, so that anyone with good practical building skills can learn enough from the many years of knowledge crammed into this instruction book to build a solid scheme, without over-spending.' Ray Holland, Manager, EU Energy Initiative, Partnership Dialogue Facility

A guide to building a custom PC provides information on planning the project, choosing the components, and constructing five different systems, including a mainstream PC and a home theater PC.

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