New materials enable advances in engineering design. This book describes a procedure for material selection in mechanical design, allowing the most suitable materials for a given application to be identified from the full range of materials and section shapes available. A novel approach is adopted not found elsewhere. Materials are introduced through their properties; materials selection charts (a new development) capture the important features of all materials, allowing rapid retrieval of information and application of selection techniques. Merit indices, combined with charts, allow optimisation of the materials selection process. Sources of material property data are reviewed and approaches to their use are given. Material processing and its influence on the design are discussed. The book closes with chapters on aesthetics and industrial design. Case studies are developed as a method of illustrating the procedure and as a way of developing the ideas further.

The Antarctic provides a suite of scenarios useful for investigating the range of climate change effects on terrestrial and limnetic biota. The purpose of the book is to provide, based on the most up to date knowledge, a synthesis of the likely effects of climate change on Antarctic terrestrial and limnetic ecosystems and, thereby, to contribute to their management and conservation, based on the information.

Vegetarian and Plant-Based Diets in Health and Disease Prevention examines the science of vegetarian and plant-based diets and their nutritional impact on human health. This book assembles the science related to vegetarian and plant-based diets in a comprehensive, balanced, single reference that discusses both the overall benefits of plant-based diets on health and the risk of disease and issues concerning the status in certain nutrients of the individuals, while providing overall consideration to the entire spectrum of vegetarian diets. Broken into five sections, the first provides a general overview of vegetarian / plant-based diets so that readers have a foundational understanding of the topic. Dietary choices and their relation with nutritional transition and sustainability issues are discussed. The second and third sections provide a comprehensive description of the relationship between plant-based diets and health and disease prevention. The fourth section provides a deeper look into how the relationship between plant-based diets and health and disease prevention may differ in populations with different age or physiological status. The fifth and final section of the book details the nutrients and substances whose intakes are related to the proportions of plant or animal products in the diet. Discusses the links between health and certain important characteristics of plant-based diets at the level of food groups Analyzes the relation between plant-based diet and health at the different nutritional levels, i.e. from dietary patterns to specific nutrients and substances Provides a balanced evidencebased approach to analyze the positive and negative aspects of vegetarianism

Addresses the different aspects of diets predominantly based on plants, including geographical and cultural variations of vegetarianism

Each family generally has an account summarizing family diagnostic characters, biological and fisheries information, notes on similar families occurring in the area, a key to species, a check list of species, and a short list of relevant literature. Families that are less important to fisheries include an abbreviated family account.

Research in the Archival Multiverse

Athletes and their support personnel are constantly seeking evidence-informed recommendations to enhance athletic performance during competition and to optimize training-induced adaptations. Accordingly, nutritional and supplementation strategies are commonplace when seeking to achieve these aims, with such practices being implemented before, during, or after competition and/or training in a periodized manner. Performance nutrition is becoming increasingly specialized and needs to consider the diversity of athletes and the nature of the competitions. This Special Issue, Nutrition Support for Athletic Performance, describes recent advances in these areas. The two-volume set LNCS 12376 and 12377 constitutes the refereed proceedings of the 17th International Conference on Computers Helping People with Special Needs, ICCHP 2020, held in Lecco, Italy, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 104 papers presented were carefully reviewed and selected from 206 submissions. Included also are 13 introductions. The papers are organized in the following topical sections: Part I: user centred design and user participation in inclusive R&D; artificial $\frac{Page}{Page}$ 3/16

intelligence, accessible and assistive technologies; XR accessibility – learning from the past, addressing real user needs and the technical architecture for inclusive immersive environments; serious and fun games; large-scale web accessibility observatories; accessible and inclusive digital publishing; AT and accessibility for blind and low vision users; Art Karshmer lectures in access to mathematics, science and engineering; tactile graphics and models for blind people and recognition of shapes by touch; and environmental sensing technologies for visual impairment Part II: accessibility of non-verbal communication: making spatial information accessible to people with disabilities; cognitive disabilities and accessibility - pushing the boundaries of inclusion using digital technologies and accessible eLearning environments; ICT to support inclusive education – universal learning design (ULD); hearing systems and accessories for people with hearing loss; mobile health and mobile rehabilitation for people with disabilities: current state, challenges and opportunities; innovation and implementation in the area of independent mobility through digital technologies; how to improve interaction with a text input system; human movement analysis for the design and evaluation of interactive systems and assistive devices; and service and care provision in assistive environments 10 chapters are available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

This is part one of a two-volume book on real analysis and is intended for senior undergraduate students of mathematics who have already been exposed to calculus. The emphasis is on rigour and foundations of analysis. Beginning with the construction of the number systems and set theory, the book discusses the basics of analysis (limits, series, continuity, differentiation, Riemann integration), through to power series, several variable

calculus and Fourier analysis, and then finally the Lebesgue integral. These are almost entirely set in the concrete setting of the real line and Euclidean spaces, although there is some material on abstract metric and topological spaces. The book also has appendices on mathematical logic and the decimal system. The entire text (omitting some less central topics) can be taught in two quarters of 25-30 lectures each. The course material is deeply intertwined with the exercises, as it is intended that the student actively learn the material (and practice thinking and writing rigorously) by proving several of the key results in the theory. Common-law judgments tend to be more than merely judgments, for judges often make pronouncements that they need not have made had they kept strictly to the task in hand. Why do they do this? The Intricacies of Dicta and Dissent examines two such types of pronouncement, obiter dicta and dissenting opinions, primarily as aspects of English case law. Neil Duxbury shows that both of these phenomena have complex histories, have been put to a variety of uses, and are not amenable to being straightforwardly categorized as secondary sources of law. This innovative and unusual study casts new light on – and will prompt lawyers to pose fresh questions about – the common law tradition and the nature of judicial decisionmaking.

This substantially revised and expanded edition of the Checklist of the Birds of New Zealand is the official list of all the birds in the New Zealand region, including Norfolk and Macquarie Islands, and the Ross Dependency, Antarctica. Published in association with the Ornithological Society of New Zealand, this comprehensive guide was compiled by the society's Checklist Committee. It provides details of the nomenclature, taxonomy, classification, status and distribution (current, historical and fossil) of every living and extinct species of New Zealand

bird and, for the first time, includes complete synonymies. More than fifty species have been added, along with thorough bibliographic references, a list of M ori bird names, a full index and updated maps. The Checklist of the Birds of New Zealand is a vital reference to New Zealand's unique avifauna.

This IBM® Redbooks® publication presents a best practices guide for DB2® and InfoSphereTM Warehouse performance on a AIX® 6L with Power SystemsTM virtualization environment. It covers Power hardware features such as PowerVMTM, multi-page support, Reliability, Availability, and Serviceability (RAS) and how to best exploit them with DB2 LUW workloads for both transactional and data warehousing systems. The popularity and reach of DB2 and InfoSphere Warehouse has grown in recent years. Enterprises are relying more on these products for their mission-critical transactional and data warehousing workloads. It is critical that these products be supported by an adequately planned infrastructure. This publication offers a reference architecture to build a DB2 solution for transactional and data warehousing workloads using the rich features offered by Power systems. IBM Power Systems have been leading players in the server industry for decades. Power Systems provide great performance while delivering reliability and flexibility to the infrastructure. This book presents a reference architecture to build a DB2 solution for transactional and data warehousing workloads using the rich features offered by Power systems. It aims to demonstrate the benefits DB2 and InfoSphere Warehouse can derive from a Power Systems infrastructure and how Power Systems support these products. The book is intended as a guide for a Power Systems specialist to understand the DB2 and InfoSphere Warehouse environment and for a DB2 and InfoSphere Warehouse specialist to understand the facilities available for Power

Systems supporting these products.

Product and Process Design: Driving Innovation is a comprehensive textbook for students and industrial professionals. It treats the combined design of innovative products and their innovative manufacturing processes, providing specific methods for BSc, MSc, PDEng and PhD courses. Students, industrial innovators and managers are guided through all design steps in all innovation stages (discovery, concept, feasibility, development, detailed engineering, and implementation) to successfully obtain novel products and their novel processes. The authors' decades of innovation experience in industry, as well as in teaching BSc, MSc, and post-academic product and process design courses, thereby including the latest design publications, culminate in this book.

Elephants are possibly the most well-known members of the animal kingdom. The enormous size, unusual anatomy, and longevity of elephants have fascinated humans for millenia. Biology, Medicine, and Surgery of Elephants serves as a comprehensive text on elephant medicine and surgery. Based on the expertise of 36 scientists and clinical veterinarians, this volume covers biology, husbandry, veterinary medicine and surgery of the elephant as known today. Written by the foremost experts in the field Comprehensively covers both Asian and African elephants Complete with taxonomy, behavioral, geographical and systemic information Well-illustrated and organized for easy reference

"The aim of this report is to define and review this "semi-aquaculture practice", which has been more accurately named "capture-based aquaculture." -- Preface.

The actuarial analysis of social protection schemes is a challenge that requires a delicate balancing act between the demographic, economic, financial, and actuarial fields. Actuarial Page 7/16

Practice in Social Security addresses this challenge by providing a practical tool for actuaries to enhance and modernize their social protection systems while still maintaining this important balance. Offering a pragmatic and results-oriented approach, this volume presents technical material on valuation covering a wide-range of risks including old age, survivors, disability, sickness, maternity, employment injury, and unemployment. It offers a comprehensive, global picture of actuarial practice in social security and provides concrete examples of work done by actuaries in the field.

This volume of the IARC Monographs provides evaluations of the carcinogenicity of bitumens and their emissions, the N-heterocyclic polycyclic aromatic hydrocarbons benz[a]acridine, benz[c]acridine, dibenz[a,h]acridine, dibenz[a,j]acridine, dibenz[c,h]acridine, carbazole and 7Hdibenzo[c,g]carbazole, as well as the S-hetrocyclic polycyclic aromatic hydrocarbons benzo[b]naphtho[2,1-d]thiophene and dibenzothiophene. Bitumens are produced by distillation of crude oil during petroleum refining, and also occur naturally. Bitumens can be divided into six broad classes, according to their physical properties and specifications required for different applications. The major use (about 80%) of bitumens is for road paving; other uses include roofing, waterproofing, sealing and painting. The term "bitumen" should not be confused with "asphalt", which refers to the mixture of bitumen (4-10% by weight), small stones, sand and filler used for road paving. Bitumens are complex mixtures that contain a large number of organic chemical compounds. Application of bitumens may generate emissions (fumes and vapours) that may contain, among volatile and non-volatile compounds, a number of known or probable carcinogens. An IARC Monographs Working Group reviewed epidemiological evidence, animal bioassays, and mechanistic and other relevant data to reach conclusions as

to the carcinogenic hazard to humans of various occupations that entail exposure to bitumens and bitumen emissions, including road paving, roofing, and application of mastic asphalt, and to various heterocyclic polycyclic aromatic compounds.

Within the past 15 years, the field of archival studies around the world has experienced unprecedented growth and archival studies graduate education programs today have among the highest enrollments in any information field. During the same period, there has also been unparalleled expansion and innovation in the diversity of methods and theories being applied in archival scholarship. Global in scope, Research in the Archival Multiverse compiles critical and reflective essays across a wide range of emerging research areas and interests in archival studies with the aim of providing current and future archival academics with a text addressing possible methods and theoretical frameworks that have been and might be used in archival scholarship. More than a collation of research methods for handy reference, this volume advocates for reflexive research practice as a means by which to lay bare the fuzziness and messiness of research. Whereas research in the form of published research papers and juried conference presentations provide a view of the study framed in terms of research questions and findings, reflexive research practice reveals the context of the study and chains of situations, choices, and decisions that influence the trajectories of the studies themselves. Such elucidations from the position of the researcher are instructive for others, who may be inspired to apply or adapt the method for their own research. (Series: ?Social Informatics) [Subject: Research Studies

The annual International Conference on Global Security, Safety and Sustainability (ICGS3) is an established platform in which security, safety and sustainability issues can be examined Page 9/16

from several global perspectives through dialogue between acad- ics, students, government representatives, chief executives, security professionals, and research scientists from the United Kingdom and from around the globe. The three-day conference focused on the challenges of complexity, rapid pace of change and risk/opportunity issues associated with modern products, systems, special events and infrastructures. The importance of adopting systematic and systemic - proaches to the assurance of these systems was emphasized within a special stream focused on strategic frameworks, architectures and human factors. The conference provided an opportunity for systems scientists, assurance researchers, owners, ope- tors and maintainers of large, complex and advanced systems and infrastructures to update their knowledge on the state of best practice in these challenging domains while networking with the leading researchers and solution providers. ICGS3 2010 received paper submissions from more than 17 different countries in all continents. Only 31 papers were selected and were presented as full papers. The program also included a number of keynote lectures by leading researchers, security professionals and government representatives. The Guide contains information and recommendations for research teams and copyright professionals studying the contribution of the copyright-based industries to the national economy. This publication is intended as a practical tool to facilitate national and regional surveys. The Guide lays out the thrust of the main legal, economic and statistical concepts, relevant to the survey. This Guide also contains a glossary of copyright terms. The second half of the 20th century and the beginning of the 21st century witnessed important changes in ecology, climate and human behaviour that favoured the development of urban pests. Most alarmingly, urban planners now face the dramatic expansion of urban sprawl, in

which city suburbs are growing into the natural habitats of ticks, rodents and other pests. Also, many city managers now erroneously assume that pest-borne diseases are relics of the past. All these changes make timely a new analysis of the direct and indirect effects of present-day urban pests on health. Such an analysis should lead to the development of strategies to manage them and reduce the risk of exposure. To this end, WHO invited international experts in various fields - pests, pest-related diseases and pest management - to provide evidence on which to base policies. These experts identified the public health risk posed by various pests and appropriate measures to prevent and control them. This book presents their conclusions and formulates policy options for all levels of decision-making to manage pests and pest-related diseases in the future. [Ed.]

The Consumer Price Index Manual: Concepts and Methods contains comprehensive information and explanations on compiling a consumer price index (CPI). The Manual provides an overview of the methods and practices national statistical offices (NSOs) should consider when making decisions on how to deal with the various problems in the compilation of a CPI. The chapters cover many topics. They elaborate on the different practices currently in use, propose alternatives whenever possible, and discuss the advantages and disadvantages of each alternative. The primary purpose of the Manual is to assist countries in producing CPIs that reflect internationally recommended methods and practices.

Through a series of recent breakthroughs, deep learning has boosted the entire field of machine learning. Now, even programmers who know close to nothing about this technology can use simple, efficient tools to implement programs capable of learning from data. This practical book shows you how. By using concrete examples, minimal theory, and two

production-ready Python frameworks—Scikit-Learn and TensorFlow—author Aurélien Géron helps you gain an intuitive understanding of the concepts and tools for building intelligent systems. You'll learn a range of techniques, starting with simple linear regression and progressing to deep neural networks. With exercises in each chapter to help you apply what you've learned, all you need is programming experience to get started. Explore the machine learning landscape, particularly neural nets Use Scikit-Learn to track an example machine-learning project end-to-end Explore several training models, including support vector machines, decision trees, random forests, and ensemble methods Use the TensorFlow library to build and train neural nets Dive into neural net architectures, including convolutional nets, recurrent nets, and deep reinforcement learning Learn techniques for training and scaling deep neural nets

One of the objectives of this book is to incorporate best practices and standards in to the BA role. While a number of standards and guidelines, such as Business Process Modeling Notation (BPMN), have been incorporated, particular emphasis has been placed on the Business Analysis Body of Knowledge (BABOK), the Information Technology Infrastructure Library (ITIL), and the Unified Modeling Language (UML).

The Darwin Elasmobranch Biodiversity Conservation and Management project in Sabah held a three-day international seminar that included a one-day workshop in order to highlight freshwater and coastal elasmobranch conservation issues in the region and worldwide, to disseminate the result of the project to other Malaysian states and countries, and to raise awareness of the importance of considering aspects of elasmobranch biodiversity in the context of nature conservation, commercial fisheries management, and for subsistence fishing

communities. These proceedings contain numerous peer-reviewed papers originally presented at the seminar, which cover a wide range of topics, with particular reference to species from freshwater and estuarine habitats. The workshop served to develop recommendations concerning the future prospects of elasmobranch fisheries, biodiversity, conservation and management. This paper records those conclusions, which highlight the importance of elasmobranchs as top marine predators and keystone species, noting that permanent damage to shark and ray populations are likely to have serious and unexpected negative consequences for commercial and subsistence yields of other important fish stocks.

We gratefully acknowledge the financial support of COST (European Cooperation in Science and Technology), funded by the Horizon 2020 Framework Programme of the European Union. Current grammatical knowledge about particular sign languages is fragmentary and of varying reliability, and it appears scattered in scientific publications where the description is often intertwined with the analysis. In general, comprehensive grammars are a rarity. The SignGram Blueprint is an innovative tool for the grammar writer: a full-fledged guide to describing all components of the grammars of sign languages in a thorough and systematic way, and with the highest scientific standards. The work builds on the existing knowledge in Descriptive Linguistics, but also on the insights from Theoretical Linguistics. It consists of two main parts running in parallel: the Checklist with all the grammatical features and phenomena the grammar writer can address, and

the accompanying Manual with the relevant background information (definitions, methodological caveats, representative examples, tests, pointers to elicitation materials and bibliographical references). The areas covered are Phonology, Morphology, Lexicon, Syntax and Meaning. The Manual is endowed with hyperlinks that connect information across the work and with a pop-up glossary. The SignGram Blueprint will be a landmark for the description of sign language grammars in terms of quality and quantity.

This book tells a fascinating story on municipal finances for local government practitioners with rich examples, global practices, and good and bad experiences the authors gained in decades of field work.

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. This document has been prepared by the Food and Agriculture Organization of the United Nations (FAO), in accordance with a request from CITES (CoP Decision 17.191 on Precious corals, for consideration at the 30th meeting of the Animals Committee). The report concerns precious (red, pink, white and black) coral species within the hexacoral order Antipatharia, and the octocoral family Coralliidae. According to the requirements of CITES Decision 17.191, the study considers all available data and information on the biology, population status, use and trade in each species, including the identification of gaps in such data and information. It contains information on the management and harvest regulation schemes for these coral species, with the aim of considering the effectiveness of their management and conservation. The report intends to inform the CITES parties of the status of the management and trade of precious corals, in order to provide guidance on the actions needed to enhance the conservation and sustainable use of precious corals.

In many fisheries they are, however, often landed and marketed. This book explores the importance of Cognitive Linguistics for specialized language within the context of Frame-based Terminology (FBT). FBT uses

aspects of Frame Semantics, coupled with premises from Cognitive Linguistics to structure specialized domains and create non-language-specific knowledge representations. Corpus analysis provides information regarding the syntax, semantics, and pragmatics of specialized knowledge units. Also studied is the role of metaphor and metonymy in specialized texts. The first section explains the purpose and structure of the book. The second section gives an overview of basic concepts, theories, and applications in Terminology and Cognitive Linguistics. The third section explains the Frame-based Terminology approach. The fourth section explores the role of contextual information in specialized knowledge representation as reflected in linguistic contexts and graphical information. The final section highlights the conclusions that can be derived from this study.

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