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Other animals are driven to spend essentially their whole lives just trying to get fed, stay alive, and get laid. That's about it. The same was true for our proto-human ancestors. And modern humans of course also require a Survival Drive and a Sex Drive in order to leave descendants. But today we spend most of our lives mainly just trying to convince ourselves that our existence is not absurd. [...]

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A Case-Based Guide to Evaluation and Management

This book provides a broad clinical overview of primary and secondary immunodeficiencies nested in clinical cases that will help the reader understand the approach to evaluation, diagnosis, and management of these challenging cases. Chapters begin with a comprehensive overview of immunodeficiencies to ground the reader in practical knowledge of the field and these complex conditions. Chapters [...]

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9 783030 571597

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H. Blanco, R. Lal

Soil Conservation and Management

This updated and expanded second edition textbook, describes all main aspects of soil management, to address the serious problems of soil erosion and the attendant environmental pollution. The global high demands for food, fiber, feed, and fuel put a constant strain on the environment, which can only be mitigated by soil conservation. This edition incorporates new concepts and provides an up-to-date review of soil management principles and practices. The authors also added new chapters on [...]

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9 783031 303432

H. Bleckmann

Stupid as a Fish?

The Surprising Intelligence Under Water

Compared to mammals, fish are often underestimated and dismissed as less complex organisms. To refute this hasty conclusion, Horst Bleckmann presents to you the highly developed cognitive abilities of fish. Did you know, for example, that fish are the largest group of all vertebrates, with about 30,000 species, and that they colonize all aquatic habitats? For this immense feat, they have evolved a variety of highly specialized sensory systems and behaviors. According to recent research, fish [...]

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B. Brand-Saberi

Essential Current Concepts in Stem Cell Biology

This textbook describes the biology of different adult stem cell types and outlines the current level of knowledge in the field. It clearly explains the basics of hematopoietic, mesenchymal and cord blood stem cells and also covers induced pluripotent stem cells. Further, it includes a chapter on ethical aspects of human stem cell research, which promotes critical thinking and responsible handling of the material. Based on the international masters program Molecular and Developmental Stem [...]

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9 783030 339227

M. Breitenbach, E. Kapferer, C. Sedmak

Stress and Poverty

A Cross-Disciplinary Investigation of Stress in Cells, Individuals, and Society

The word stress is everywhere and highly overused. Everyone is stressed, it seems, all the time. Looking into the meaning of stress in the natural science and the humanities, this book explores cellular stress as cause of and in correlation with what humans experience as stress. When do we psychologically feel stress and when do we show physiological evidence of stress in our brain? Stress is a deviation from what feels normal and healthy. It can be created by social or economic factors and [...]

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Veterinary Forensic Pathology, Volume 1

This richly illustrated two-volume book offers a comprehensive and essential reference guide for veterinary pathologists and clinical veterinarians interested in performing animal necropsies for forensic casework. It presents a broad range of animal crime cases, with particular focus on the post mortem examination and the observed pathology. This first volume introduces readers to veterinary forensics and the role of the veterinary pathologist in animal crime investigations. It guides them [...]

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J. W. Brooks

Veterinary Forensic Pathology, Volume 2

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A. Calbet

The Wonders of Marine Plankton

Marine plankton, despite their tiny size, are crucial for the functioning of marine food webs. It is not just about one organism eating another; when this happens, it helps release the nutrients accumulated within living matter, making them available again for microalgae. Plankton are present in freshwater and in all the seas and oceans on the planet. Moreover, they are responsible for supporting life on Earth and has provided us (on geological timescales) with a significant portion of the [...]

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C. Carlberg, S. M. Ulven, E. Velleuer

Aging

How Science Works

Aging is a topic that concerns all of us, since none of us can escape it. The molecular and cellular process is built in every of the billions of cells forming our body. Some of these cells, such as immune cells and red blood cells, live only for a few days to weeks and get life-long constantly replaced by cells produced in the bone marrow. In contrast, there are cells, such as neurons and memory lymphocytes, that get as old as we get. The process of aging limits our maximal life span, which [...]

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D. Cammarano, F. K. van Evert, C. Kempenaar

Precision Agriculture: Modelling

This book describes how models are used to monitor crops and soils in precision agriculture, and how they are used to support farmers' decisions. The introductory section starts with an overview of precision agriculture from the early days of yield monitoring in the 1980s to the present, with a focus on the role of models. The section continues with descriptions of the different kinds of models and the opportunities for their application in precision agriculture. The section concludes with a [...]

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C. Carlberg

Gene Regulation and Epigenetics

How Science Works

This book delves into the fascinating realm of eukaryotic gene regulation. The specific expression of genes shapes the phenotype of cells and tissues. The regulation of gene expression, including up- and downregulation, is a fundamental aspect of nearly all physiological processes, both in health and disease. These dynamic processes respond to various daily challenges, such as dietary changes and infections. Therefore, it is crucial for not only biologists and biochemists but also all [...]

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C. Carlberg, F. Molnár

Human Epigenomics

The term epigenetics describes regulatory and information storing mechanisms of specific genes that do not involve any change of their DNA sequence. Epigenetics is closely related to the extensively folded state, in which the genome is packaged, known as chromatin. New genomic tools nowadays allow the genome-wide assessment of, for example, chromatin states and DNA modifications, and led to the discovery of unexpected new epigenetic principles, such as epigenomic memory. This was the start [...]

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A Complete Guide

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How Tales about Love, Sex, Races, Gods and Progress Affect Our Lives and Earth's Splendor

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H. Dong, S. N. Markovic

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This comprehensively updated new edition provides patients and their physicians (especially non-oncologist healthcare providers) with a clear and concise introduction to cancer immunotherapy. Unlike traditional forms of cancer therapy, immunotherapy acts by boosting the patient's own immune system to fight cancer; immunotherapy's unique features make its management, monitoring and side-effects different from those of traditional cancer therapy. Especially novel are the side effects of cancer [...]

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C. M. Duarte

Ocean – The Secret of Planet Earth

The ocean characterises planet Earth and differentiates it from the more than 5000 known planets. It is also the habitat where life emerged as a singularity in the universe. However, we know less about the oceans than we do about some remote planets such as Mars. This book provides basic facts for understanding the oceans, their properties and their importance to mankind through the ages. The long relationship between the ocean and humanity, which permeates all areas of our culture, is at a [...]

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9 783031 559785

E. Ernst

Alternative Medicine

A Critical Assessment of 202 Modalities

Alternative medicine (AM) is popular; about 40% of the US general population have used alternative treatment in the past year, and in Germany this figure is around 70%. The global market is expected to reach nearly US \$ 200 billion by 2025, with most of these funds coming directly out of consumers' pockets. Consumers are bombarded with misleading and false information on AM and therefore prone to making wrong, unwise, or dangerous therapeutic decisions, endangering their health and wasting [...]

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9 783031 107092

S. Ekins

Winning Grants

As an academic or a small business owner, you will need to write grants at some point in your career. Writing them though is not enough, what you also need to know is how to win grants. Much has been written about writing grants, the mysterious special ability called 'grants-manship,' so it occurred to me that there is a need to come at this differently and spill the beans. The difficulty in getting a grant, in particular an NIH grant like an R01 in the USA is often described, it is [...]

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G. F. Esteban, T. M. Fenchel

Ecology of Protozoa

The Biology of Free-living Phagotrophic Protists

This book emphasises the important role that protozoa play in many natural ecosystems. To shed new light on their individual adaptive skills, the respective chapters examine the ecology and functional biology of this diverse group of eukaryotic microbes. Protozoa are well-established model organisms that exemplify many general problems in population ecology and community ecology, as well as evolutionary biology. Their particular characteristics, like large population sizes, life cycles and [...]

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9 783030 599782

A. Estrada-Peña, A. D. Mihalca, T. N. Petney

Ticks of Europe and North Africa

A Guide to Species Identification

This book includes descriptive keys for identifying every stage of all the species of ticks reported in Europe and northern Africa. It includes descriptive texts on the ecology and prominent features of each species, together with ink illustrations and distribution maps of more than 60 species of hard and soft ticks. The text for each species was prepared by specialists, the illustrations were made especially for this book and the maps were compiled on the basis of more than 40 years of [...]

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A. Kumar, K. Patruni, V. Singh

Recent Advances in Food Biotechnology

This book highlights important aspects of food biotechnology. It is very thoughtfully divided into five sections. The first section introduces the readers to food biotechnology and discusses functional foods, use of plant and animal biotechnology in improving food quality. The second section deals with food microbiology and includes topics such as application of microbial surfactants, use of probiotics, beneficial microorganisms used in food industry etc. The third section describes [...]

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R. H. W. Lam, W. Chen

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M. Lames

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H. E. Laurentin Táriba

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From the DNA Molecule to Population Management

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Y. K. Lee

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What We Learn From the Green in the Treeless White World

The Arctic is a special world. The Arctic Ocean is covered by white sea ice, and its margins are surrounded by bare terrestrial regions, known as tundra. Tundra is a cold and dry environment without trees, but even in the absence of trees, tundra plants such as dwarf shrubs, grasses, herbs and moss support the harsh environment by providing sustenance and shelter. This book introduces representative arctic plants and their function in Svalbard, revealing the unique tundra ecosystem, and [...]

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J. Lüders

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C. Ma, Y. Huang

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P. Macheras

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Y. S. Malik, R. K. Singh, M. P. Yadav

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S. Masson, S. Bleuer-Elsner, G. Muller, T. Medam, J. Chevallier, E. Gaultier

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9 783031 530111

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9 783030 098353

G. H. Miller

Whisky Science

A Condensed Distillation

To be updated with second edition. This is a book about the science behind whisky: its production, its measurement, and its flavor. The main purpose of this book is to review the current state of whisky science in the open literature. The focus is principally on chemistry, which describes molecular structures and their interactions, and chemical engineering which is concerned with realizing chemical processes on an industrial scale. Biochemistry, the branch of chemistry concerned with living [...]

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9 783031 506864

P. S. Minhas, M. Qadir

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Extent, Impacts and Management Guidelines

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L. Moretto, J. L. Coleman, C. M. Davy, M. B. Fenton, C. Korine, K. J. Patriquin

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M. Mosher, K. Trantham

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K. G. Narayan, D. K. Sinha, D. K. Singh

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S. Paul

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F. Pérez-Miles

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J. S. Pfadenhauer, F. A. Klötzli

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R. F. Phalen

Core Ethics for Health Professionals

Principles, Issues, and Compliance

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S. Pöggeler, T. James

Evolution of Fungi and Fungal-Like Organisms

Sequence analyses of numerous fungal genomes over the past two decades have provided us with extensive insights into the phylogenetic relationships of fungi and the distribution of genes and their inferred functions, across the fungal kingdom. It is now possible to answer questions about the origin of the fungal kingdom and fungal evolution with an analytical precision that was not possible before. This fully revised and updated 2nd edition of *The Mycota*, Vol. 14, addresses major aspects of [...]

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H. H. T. Prins, I. J. Gordon

The Equids

A Suite of Splendid Species

The narrative of the progression of the 'horse family' through geological time, from dog-sized fruit-eating animals with four toes on their front and three toes on their hind legs, to the valiant long-legged, single-toed modern grazing horses, beloved by racing enthusiasts, is the poster child of evolution. However, like the rhinos or tapirs, the horse-like zebras, wild asses, kulans, kiangs, onagers, and the real horses are often portrayed as being past their evolutionary peak as compared [...]

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M. Raut, M. Raut

Lymphocyte Immunization Therapy (LIT) in Reproductive Failures

New Horizons

Recurrent Miscarriages (RM) & Implantation Failure (IF) have remained an enigma to clinicians and researchers. Even after ruling out all possible causative factors, 50–60% cases still remain 'Unexplained'. A majority of these so called "Unexplained" cases are now found to have immunological basis. This book is going into the Immunological aspects of these clinical dilemmas, demystifying the role of Immunology and Immunotherapy in RM and IF. The authors have been working in the field of [...]

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9 789811 929595

N. Rezaei

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A. Riccroch, S. Chopra, M. Kuntz

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E. Rosenberg

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This book examines an important paradigm shift in biology: Plants and animals, traditionally viewed as individuals, are now considered to be complex systems and host to a plethora of microorganisms. After first presenting historical aspects of microbiota research, bacterial compositions of individual microbiomes and the critical analysis of current methods, the book discusses how microbial communities inside the [...]

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9 783030 653163

S. Rowland, L. Kuchel

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R. Rozzi, A. Tauro, N. Avriel-Avni, T. Wright, R. H. May Jr.

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9 783031 352737

G. E. Scarascia-Mugnozza, V. Guallart, F. Salbitano, G. Ottaviani Aalmo, S. Boeri

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Designing Urban Spaces
 Inspired by Nature

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9 783319 957012

U. C. Schreiber, C. Mayer

The First Cell

The Mystery Surrounding
 the Beginning of Life

This book introduces a fresh perspective on the conditions for the genesis of the first cell. An important possible environment of the prehistoric Earth has long been overlooked as a host to the perfect biochemical conditions for this process. The first complexes of continental crust on the early Earth must have already contained systems of interconnected cracks and cavities, which were filled with volatiles like water, carbon dioxide and nitrogen. This book offers insights into how these [...]

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9 783030 453800

H. Schröder, R. A. I. de Vos, S. Huggenberger, L. Müller-Thomsen, A. Rozemuller, F. Hedayat, N. Moser

The Human Brainstem

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The human brainstem has long been a neglected area in clinical medicine. This is shown by the fact that there is no introductory book on the neuroanatomy and pathology of this region. This book is intended to introduce the reader to the neuroanatomy of the human brainstem and combines an atlas with detailed information on the individual structures. The atlas features a state-of-the-art magnetic resonance imaging series, histological specimens (Darrow Red and Campbell staining) and a [...]

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T. R. Sharma, R. Deshmukh, H. Sonah

Advances in Agri-Food Biotechnology

This book presents biotechnological advances and approaches to improving the nutritional value of agri-foods. The respective chapters explore how biotechnology is being used to enhance food production, nutritional quality, food safety and food packaging, and to address postharvest issues. Written and prepared by eminent scientists working in the field of food biotechnology, the book offers authentic, reliable and detailed information on technological advances, fundamental principles, and the [...]

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E. Song

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An Ecological View of Cancer Growth and Survival

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R. Sõukand, R. Kalle

Changes in the Use of Wild Food Plants in Estonia

18th – 21st Century

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When the Immune System and Brain Compete for Energy in the Body

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B. Strauss, S. Buenemann, C. Behlau, M. Tietjens, K. Tamminen

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P. J. Taormina, M. D. Hardin

Food Safety and Quality-Based Shelf Life of Perishable Foods

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J. Tautz

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B. ter Kuile

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Digital Preservation Metadata for Practitioners Implementing PREMIS

This book begins with an introduction to fundamental issues related to digital preservation metadata before proceeding to in-depth coverage of issues concerning its practical use and implementation. It helps readers to understand which options need to be considered in specifying a digital preservation metadata profile to ensure it matches their individual content types, technical infrastructure, and organizational needs. Further, it provides practical guidance and examples, and raises [...]

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P. Ferragina, F. Luccio

Computational Thinking First Algorithms, Then Code

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9 783031 599217

J. Fitzgerald, C. Gomes, P. G. Larsen

The Engineering of Digital Twins

This book is about the engineering of Digital Twins (DTs) of cyber-physical systems (CPSs). It goes behind the glossy image of DTs to help researchers and advanced professionals to ask and answer the fundamental questions underpinning the development of a DT. What are the foundational concepts of the DT? How do different engineering disciplines interact in creating a DT? How should the physical and digital worlds be connected, and how do the imperfections and faults inherent in both worlds [...]

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9 783031 667183

K. Furmanová, B. Kozlíková, T. Höllt, M. E. Gröller, B. Preim, R. G. Raidou

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Past Work, Current Trends, and Open Challenges

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9 783031 667886

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Y. Geng, Q. Li, G. Yang, W. Qiu

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This book guides professionals and students from various backgrounds to use machine learning in their own fields with low-code platform KNIME and without coding. Many people from various industries need use machine learning to solve problems in their own domains. However, machine learning is often viewed as the domain of programmers, especially for those who are familiar with Python. It is too hard for people from different backgrounds to learn Python to use machine learning. KNIME, the [...]

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9 789819 739530

I. Gräßler, G. W. Maier, E. Steffen, D. Roesmann

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An Interdisciplinary Concept of Digital Working Environments in Industry 4.0

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9 783031 261039

A. Hameurlain, A. M. Tjoa

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G. K. Hanssen, T. Stålhane, T. Myklebust

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J. D. Hidary

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G. Hjort Blindell

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R. Hoda

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9 783031 605321

B. E. Hollister, A. Pang

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Past, Present, and Future

Scientific visualization has always been an integral part of discovery, starting first with simplified drawings of the pre-Enlightenment and progressing to present day. Mathematical formalism often supersedes visual methods, but their use is at the core of the mental process. As historical examples, a spatial description of flow led to electromagnetic theory, and without visualization of crystals, structural chemistry would not exist. With the advent of computer graphics technology, [...]

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A. K. Jain, A. A. Ross, K. Nandakumar, T. Swearingen

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9 783031 616747

C. B. Jones

Understanding Programming Languages

This book is about describing the meaning of programming languages. The author teaches the skill of writing semantic descriptions as an efficient way to understand the features of a language. While a compiler or an interpreter offers a form of formal description of a language, it is not something that can be used as a basis for reasoning about that language nor can it serve as a definition of a programming language itself since this must allow a range of implementations. By writing a formal [...]

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9 783030 592592

N. Kalicharan

Julia – Bit by Bit

Programming for Beginners

The main goal of this book is to teach fundamental programming principles to beginners using Julia, one of the fastest growing programming languages today. Julia can be classified as a “modern” language, possessing many features not available in more popular languages like C and Java. The book is organized in 10 chapters. Chapter 1 gives an overview of the programming process. It shows how to write a first Julia program and introduces some of the basic building blocks needed to [...]

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9 783031 519130

A. Pettorossi

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9 783031 667077

L. Reinkemeyer

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U. Achatz

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O. Aderibigbe, T. Gumbo, S. O. Fadare

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S. M. Awadh, M. Al-Dabbas

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P. Bertrand, L. Legendre

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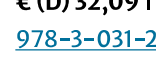
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