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Springer Handbook of Automation - Shimon Y. Nof 2009-07-16

This handbook incorporates new developments in automation. It also presents a widespread and well-structured conglomeration of new emerging application areas, such as medical systems and health, transportation, security and maintenance, service, construction and retail as well as production or logistics. The handbook is

not only an ideal resource for automation experts but also for people new to this expanding field.

Of Human Bondage - William Somerset Maugham 1915

RETRACTED BOOK: 151 Trading Strategies - Zura Kakushadze 2018-12-13

The book provides detailed descriptions,

including more than 550 mathematical formulas, for more than 150 trading strategies across a host of asset classes and trading styles. These include stocks, options, fixed income, futures, ETFs, indexes, commodities, foreign exchange, convertibles, structured assets, volatility, real estate, distressed assets, cash, cryptocurrencies, weather, energy, inflation, global macro, infrastructure, and tax arbitrage. Some strategies are based on machine learning algorithms such as artificial neural networks, Bayes, and k-nearest neighbors. The book also includes source code for illustrating out-of-sample backtesting, around 2,000 bibliographic references, and more than 900 glossary, acronym and math definitions. The presentation is intended to be descriptive and pedagogical and of particular interest to finance practitioners, traders, researchers, academics, and business school and finance program students.

Program Logics for Certified Compilers - Andrew

W. Appel 2014-04-21

This tutorial for graduate students covers practical and theoretical aspects of separation logic with constructions and proofs in Coq.

Chemical Engineering Design - Gavin Towler

2012-01-25

Chemical Engineering Design, Second Edition, deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, this edition has been specifically developed for the U.S. market. It provides the latest US codes and standards, including API, ASME and ISA design codes and ANSI standards. It contains new discussions of conceptual plant design, flowsheet development, and revamp design; extended coverage of capital cost estimation, process costing, and economics; and new chapters on equipment selection, reactor design, and solids handling processes. A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus

supporting data, and Excel spreadsheet calculations, plus over 150 Patent References for downloading from the companion website. Extensive instructor resources, including 1170 lecture slides and a fully worked solutions manual are available to adopting instructors. This text is designed for chemical and biochemical engineering students (senior undergraduate year, plus appropriate for capstone design courses where taken, plus graduates) and lecturers/tutors, and professionals in industry (chemical process, biochemical, pharmaceutical, petrochemical sectors). New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing

engineers working on design projects. New discussion of conceptual plant design, flowsheet development and revamp design Significantly increased coverage of capital cost estimation, process costing and economics New chapters on equipment selection, reactor design and solids handling processes New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography Increased coverage of batch processing, food, pharmaceutical and biological processes All equipment chapters in Part II revised and updated with current information Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards Additional worked examples and homework problems The most complete and up to date coverage of equipment selection 108 realistic commercial design projects from diverse industries A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and

Excel spreadsheet calculations plus over 150 Patent References, for downloading from the companion website Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

Cosmeceuticals and Active Cosmetics - Raja K Sivamani 2015-09-18

Cosmeceuticals and Active Cosmetics discusses the science of nearly two dozen cosmeceuticals used today. This third edition provides ample evidence on specific cosmeceutical substances, their classes of use, skin conditions for which they are used, and points of interest arising from other considerations, such as toxicology and manufacturing. The book discusses both cosmetic and therapeutic uses of cosmeceuticals for various conditions including rosacea, dry skin, alopecia, eczema, seborrheic dermatitis, purpura, and vitiligo. Active ingredients in the following products are discussed: caffeine, curcumin, green tea, Rhodiola rosea, milk

thistle, and more. Also covered are topical peptides and proteins, amino acids and derivatives, antioxidants, vitamins E and C, niacinamide, botanical extracts, and biomarine actives. Providing ample scientific references, this book is an excellent guide to understanding the science behind the use of cosmeceuticals to treat a variety of dermatological conditions.

Imaging of Orbital and Visual Pathway Pathology - Wibke S. Müller-Forell 2006-01-14

Deals with imaging of pathology of the visual system. This book is divided into two parts, general and special. In the general part, important basics of modern imaging methods are discussed. The knowledge on the indication, technique, and results of functional MR imaging is also presented.

Mycoplasma bovis Infections - Katarzyna Dudek 2021-03-11

This book presents the most important issues related to infections with Mycoplasma bovis, an etiological agent of many disorders in cattle,

such as bronchopneumonia, mastitis, arthritis, otitis, keratoconjunctivitis, meningitis, and endocarditis. It consists of one review and eight research articles that discuss lung local immunity in experimental M. bovis pneumonia, antimicrobial susceptibility of M. bovis isolates, aspects related to M. bovis antibody testing, new data on the efficacy of seminal extender in M. bovis, as well as the importance of imported bull examination for this pathogen.

PASCAL User Manual and Report - Kathleen Jensen 2013-06-29

A preliminary version of the programming language Pascal was drafted in 1968. It followed in its spirit the Algol-60 and Algol-W line of languages. After an extensive development phase, a first compiler became operational in 1970, and publication followed a year later (see References 1 and 8, p.14). The growing interest in the development of compilers for other computers called for a consolidation of Pascal, and two years of

experience in the use of the language dictated a few revisions. This led in 1973 to the publication of a Revised Report and a definition of a language representation in terms of the ISO character set. This booklet consists of two parts: The User Manual, and the Revised Report. The Manual is directed to those who have previously acquired some familiarity with computer programming, and who wish to get acquainted with the language Pascal. Hence, the style of the Manual is that of a tutorial, and many examples are included to demonstrate the various features of Pascal. Summarising tables and syntax specifications are added as Appendices. The Report is included in this booklet to serve as a concise, ultimate reference for both programmers and implementors. It defines standard Pascal which constitutes a common base between various implementations of the language.

Algorithms for Scheduling Problems - Frank Werner 2018-08-24

This book is a printed edition of the Special Issue " Algorithms for Scheduling Problems" that was published in Algorithms
The Legislative Manual of the State of Minnesota - Minnesota 1878

The Women's Army Corps, 1945-1978 - Bettie J. Morden 2011-10-07

After years out of print, this new and redesigned book brings back the best and most complete history of the Women's Army Corps. Loaded with history, tables, charts, statistics, photos, personalities, and many useful appendices (including a history of WAC uniforms), *The Women's Army Corps, 1945-1978* is must reading for anyone who served those years in the Army as well as for those who want a complete history of the modern-day military. Author Bettie Morden served from 1942-1972 and she used her experience and access to people and records to compile the definitive reference work. Col. Morden is a graduate of the

WAC Officers' Advanced Course (1962); Command and General Staff College (1964); and the Army Management School (1965). She has been awarded the Distinguished Service Medal, the Legion of Merit, the Joint Service Commendation Medal, and the Army Commendation Medal with Oak Leaf Cluster.
Fundamentals of Rocket Propulsion - DP Mishra 2017-07-20

The book follows a unified approach to present the basic principles of rocket propulsion in concise and lucid form. This textbook comprises of ten chapters ranging from brief introduction and elements of rocket propulsion, aerothermodynamics to solid, liquid and hybrid propellant rocket engines with chapter on electrical propulsion. Worked out examples are also provided at the end of chapter for understanding uncertainty analysis. This book is designed and developed as an introductory text on the fundamental aspects of rocket propulsion for both undergraduate and graduate students.

It is also aimed towards practicing engineers in the field of space engineering. This comprehensive guide also provides adequate problems for audience to understand intricate aspects of rocket propulsion enabling them to design and develop rocket engines for peaceful purposes.

Pressure Vessel Design Manual - Dennis R. Moss
2012-12-31

Pressure vessels are closed containers designed to hold gases or liquids at a pressure substantially different from the ambient pressure. They have a variety of applications in industry, including in oil refineries, nuclear reactors, vehicle airbrake reservoirs, and more. The pressure differential with such vessels is dangerous, and due to the risk of accident and fatality around their use, the design, manufacture, operation and inspection of pressure vessels is regulated by engineering authorities and guided by legal codes and standards. *Pressure Vessel Design Manual* is a

solutions-focused guide to the many problems and technical challenges involved in the design of pressure vessels to match stringent standards and codes. It brings together otherwise scattered information and explanations into one easy-to-use resource to minimize research and take readers from problem to solution in the most direct manner possible. Covers almost all problems that a working pressure vessel designer can expect to face, with 50+ step-by-step design procedures including a wealth of equations, explanations and data Internationally recognized, widely referenced and trusted, with 20+ years of use in over 30 countries making it an accepted industry standard guide Now revised with up-to-date ASME, ASCE and API regulatory code information, and dual unit coverage for increased ease of international use
The Telegraph Manual - Taliaferro Preston Shaffner 1859

[High-Dimensional Probability](#) - Roman Vershynin

2018-09-30

High-dimensional probability offers insight into the behavior of random vectors, random matrices, random subspaces, and objects used to quantify uncertainty in high dimensions.

Drawing on ideas from probability, analysis, and geometry, it lends itself to applications in mathematics, statistics, theoretical computer science, signal processing, optimization, and more. It is the first to integrate theory, key tools, and modern applications of high-dimensional probability. Concentration inequalities form the core, and it covers both classical results such as Hoeffding's and Chernoff's inequalities and modern developments such as the matrix Bernstein's inequality. It then introduces the powerful methods based on stochastic processes, including such tools as Slepian's, Sudakov's, and Dudley's inequalities, as well as generic chaining and bounds based on VC dimension. A broad range of illustrations is embedded throughout, including classical and

modern results for covariance estimation, clustering, networks, semidefinite programming, coding, dimension reduction, matrix completion, machine learning, compressed sensing, and sparse regression.

Programming Challenges - Steven S Skiena
2006-04-18

There are many distinct pleasures associated with computer programming. Craftsmanship has its quiet rewards, the satisfaction that comes from building a useful object and making it work. Excitement arrives with the flash of insight that cracks a previously intractable problem. The spiritual quest for elegance can turn the hacker into an artist. There are pleasures in parsimony, in squeezing the last drop of performance out of clever algorithms and tight coding. The games, puzzles, and challenges of problems from international programming competitions are a great way to experience these pleasures while improving your algorithmic and coding skills. This book contains

over 100 problems that have appeared in previous programming contests, along with discussions of the theory and ideas necessary to attack them. Instant online grading for all of these problems is available from two WWW robot judging sites. Combining this book with a judge gives an exciting new way to challenge and improve your programming skills. This book can be used for self-study, for teaching innovative courses in algorithms and programming, and in training for international competition. The problems in this book have been selected from over 1,000 programming problems at the Universidad de Valladolid online judge. The judge has ruled on well over one million submissions from 27,000 registered users around the world to date. We have taken only the best of the best, the most fun, exciting, and interesting problems available.

Handbook of Healthcare Operations

Management - Brian T. Denton 2013-02-28

From the Preface: Collectively, the chapters in

this book address application domains including inpatient and outpatient services, public health networks, supply chain management, and resource constrained settings in developing countries. Many of the chapters provide specific examples or case studies illustrating the applications of operations research methods across the globe, including Africa, Australia, Belgium, Canada, the United Kingdom, and the United States. Chapters 1-4 review operations research methods that are most commonly applied to health care operations management including: queuing, simulation, and mathematical programming. Chapters 5-7 address challenges related to inpatient services in hospitals such as surgery, intensive care units, and hospital wards. Chapters 8-10 cover outpatient services, the fastest growing part of many health systems, and describe operations research models for primary and specialty care services, and how to plan for patient no-shows. Chapters 12 - 16 cover topics related to the

broader integration of health services in the context of public health, including optimizing the location of emergency vehicles, planning for mass vaccination events, and the coordination among different parts of a health system.

Chapters 17-18 address supply chain management within hospitals, with a focus on pharmaceutical supply management, and the challenges of managing inventory for nursing units. Finally, Chapters 19-20 provide examples of important and emerging research in the realm of humanitarian logistics.

Manual of Pesticide Residue Analysis, Manual of Pesticide Residue Analysis V II - Hans-Peter Thier 1992-10-21

This collection of up-to-date methods for analyzing pesticide residues represents those proven methods that are of most value to the analyst. The methods chosen demonstrate a particularly high standard of reliability and have all been validated by at least one other specially qualified laboratory. They are also presented in

such detailed and readily understandable form that analysts using them cannot possibly be left in doubt about how to proceed. Each of the single methods specifies the substrates to which it is suited and on which it has been validated, among them food crops, stored commodities, processed food of vegetable and animal origin, feedstuffs, forage and fodder crops, soil, and water. Both Volumes arrange the compound-specific methods in the alphabetical order of the compound names. They also contain indexes to provide quick access to the desired method. The single methods each contain the chemical name and the structural formula of the respective compound. Multiple methods are preceded by a table in which chemical names and structural formulae are presented jointly for all compounds.

Receptor Tyrosine Kinases: Structure, Functions and Role in Human Disease -

Deric L. Wheeler 2014-11-26

Receptor Tyrosine Kinase: Structure, Functions

and Role in Human Disease, for the first time, systematically covers the shared structural and functional features of the RTK family. Receptor Tyrosine Kinases (RTKs) play critical roles in embryogenesis, normal physiology and several diseases. And over the last decade they have become the Number 1 targets of cancer drugs. To be able to conduct fundamental research or to attempt to develop pharmacological agents able to enhance or intercept them, it is essential first to understand the evolutionary origin of the 58 RTKs and their roles in invertebrates and in humans, as well as downstream signaling pathways. The assembly of chapters is written by experts and underscores commonalities between and among the RTKs. It is an ideal companion volume to *The Receptor Tyrosine Kinase: Families and Subfamilies*, which proceeds, family by family through all of the specific subfamilies of RTKs, along with their unique landmarks.

Nutritional Status Assessment - F L A M I N I O

FIDANZA 2013-11-22

Applied Stochastic Differential Equations - Simo Särkkä 2019-05-02

With this hands-on introduction readers will learn what SDEs are all about and how they should use them in practice.

Physical Foundations of Materials Science - Günter Gottstein 2013-03-09

In this vivid and comprehensible introduction to materials science, the author expands the modern concepts of metal physics to formulate basic theory applicable to other engineering materials, such as ceramics and polymers. Written for engineering students and working engineers with little previous knowledge of solid-state physics, this textbook enables the reader to study more specialized and fundamental literature of materials science. Dozens of illustrative photographs, many of them transmission electron microscopy images, plus line drawings, aid developing a firm appreciation

of this complex topic. Hard-to-grasp terms such as "textures" are lucidly explained - not only the phenomenon itself, but also its consequences for the material properties. This excellent book makes materials science more transparent.

Numerical Methods for Large Eigenvalue Problems - Yousef Saad 2011-01-01

This revised edition discusses numerical methods for computing eigenvalues and eigenvectors of large sparse matrices. It provides an in-depth view of the numerical methods that are applicable for solving matrix eigenvalue problems that arise in various engineering and scientific applications. Each chapter was updated by shortening or deleting outdated topics, adding topics of more recent interest, and adapting the Notes and References section. Significant changes have been made to Chapters 6 through 8, which describe algorithms and their implementations and now include topics such as the implicit restart techniques, the Jacobi-Davidson method, and automatic

multilevel substructuring.

Leong's Manual of Diagnostic Antibodies for Immunohistology - Runjan Chetty 2016-11-28
A detailed, A-Z guide and an indispensable source for pathologists ensuring correct application of immunohistochemistry in daily practice.

Handbook of Print Media - Helmut Kipphan 2014-02-27

Printers nowadays are having to learn new technologies if they are to remain competitive. This innovative, practical manual is specifically designed to cater to these training demands. Written by an expert in the field, the Handbook is unique in covering the entire spectrum of modern print media production. Despite its comprehensive treatment, it remains an easy-to-use, single-volume reference, with all the information clearly structured and readily retrievable. The author covers both traditional as well as computer-aided technologies in all stages of production, as well as electronic media

and multimedia. He also deals with training, research, strategies and trends, showing readers how to implement the latest methods. With 1,200 pages, containing 1,500 illustrations - over half in colour - the Handbook conveys the current state of technology together with its specific terminology. The accompanying CD-ROM includes the entire manual in fully searchable form, plus additional software tools. Invaluable information for both beginners and "old hands" in printing works, publishing houses, trade associations, the graphics industry, and their suppliers.

Nuclear Science Abstracts - 1971

Design of Observational Studies - Paul R. Rosenbaum 2009-10-22

An observational study is an empiric investigation of effects caused by treatments when randomized experimentation is unethical or infeasible. Observational studies are common in most fields that study the effects of

treatments on people, including medicine, economics, epidemiology, education, psychology, political science and sociology. The quality and strength of evidence provided by an observational study is determined largely by its design. Design of Observational Studies is both an introduction to statistical inference in observational studies and a detailed discussion of the principles that guide the design of observational studies. Design of Observational Studies is divided into four parts. Chapters 2, 3, and 5 of Part I cover concisely, in about one hundred pages, many of the ideas discussed in Rosenbaum's Observational Studies (also published by Springer) but in a less technical fashion. Part II discusses the practical aspects of using propensity scores and other tools to create a matched comparison that balances many covariates. Part II includes a chapter on matching in R. In Part III, the concept of design sensitivity is used to appraise the relative ability of competing designs to distinguish treatment

effects from biases due to unmeasured covariates. Part IV discusses planning the analysis of an observational study, with particular reference to Sir Ronald Fisher's striking advice for observational studies, "make your theories elaborate." The second edition of his book, *Observational Studies*, was published by Springer in 2002.

Index-catalogue of the Library of the Surgeon-General's Office, United States Army - Library of the Surgeon-General's Office (U.S.) 1904

A Manual of Egyptian Pottery, Volume 1 - Anna Wodzinska 2011-04

This is the first volume in a four-book set covering all Egyptian pottery, ranging from the earliest (Fayum A) ceramics to pottery made in Egypt today, organised by historical periods. The manuals are quick identification guides as well as starting points for more extensive research. For each period, ceramic types are illustrated

with a line drawing, accompanied by a description that includes information on the pot's material, manufacturing techniques, surface treatment and shape. Colour plates of representative ceramic types are included to give the clearest sense of the colour, composition and surface treatment. All four volumes provide an extensive list of suggested readings as well as a bibliography for each period. Introductory chapters in each book discuss the basics of pottery manufacture and analysis. This second edition boasts a new, expanded introduction. The first comprehensive guide to Egyptian pottery, this set will prove valuable to students as well as experienced field archaeologists. The volumes come in paperback and spiral-bound versions. The spiral bound versions, with hard laminated covers and tabs, are designed especially for the field and lab.

National Electrical Code - National Fire Protection Association 2010

Safe, efficient, code-compliant electrical

installations are made simple with the latest publication of this widely popular resource. Like its highly successful previous editions, the National Electrical Code 2011 spiral bound version combines solid, thorough, research-based content with the tools you need to build an in-depth understanding of the most important topics. New to the 2011 edition are articles including first-time Article 399 on Outdoor, Overhead Conductors with over 600 volts, first-time Article 694 on Small Wind Electric Systems, first-time Article 840 on Premises Powered Broadband Communications Systems, and more. This spiralbound version allows users to open the code to a certain page and easily keep the book open while referencing that page. The National Electrical Code is adopted in all 50 states, and is an essential reference for those in or entering careers in electrical design, installation, inspection, and safety. [Library of Congress Catalogs](#) - Library of Congress 1970

Linear Algebra for Economists - Fuad Aleskerov 2011-08-18

This textbook introduces students of economics to the fundamental notions and instruments in linear algebra. Linearity is used as a first approximation to many problems that are studied in different branches of science, including economics and other social sciences. Linear algebra is also the most suitable to teach students what proofs are and how to prove a statement. The proofs that are given in the text are relatively easy to understand and also endow the student with different ways of thinking in making proofs. Theorems for which no proofs are given in the book are illustrated via figures and examples. All notions are illustrated appealing to geometric intuition. The book provides a variety of economic examples using linear algebraic tools. It mainly addresses students in economics who need to build up skills in understanding mathematical reasoning. Students in mathematics and informatics may

also be interested in learning about the use of mathematics in economics.

Bergey's Manual of Systematic Bacteriology -

David R. Boone 2013-02-16

Bacteriologists from all levels of expertise and within all specialties rely on this Manual as one of the most comprehensive and authoritative works. Since publication of the first edition of the Systematics, the field has undergone revolutionary changes, leading to a phylogenetic classification of prokaryotes based on sequencing of the small ribosomal subunit. The list of validly named species has more than doubled since publication of the first edition, and descriptions of over 2000 new and realigned species are included in this new edition along with more in-depth ecological information about individual taxa and extensive introductory essays by leading authorities in the field.

The Glaucoma Book - Paul N. Schacknow
2010-06-10

Complete evidence-based medical and surgical

management of glaucoma for both the general ophthalmologist in practice and residents The only book that covers the new generation of glaucoma procedures including trabectome, trabecular bypass and canaloplasty, by the experts who developed them Includes the latest laser treatments for glaucoma including micro diode and titanium sapphire trabeculoplasty as well as laser from an external approach The most comprehensive coverage of the optic nerve and the importance of nerve fiber layer hemorrhage Provides an integrated approach to neovascular glaucoma merging treatment to the retina, with the use of new anti-VEGF drugs, tubes, and shunts to achieve the best outcome Integrates clinical science with basic science to outline the next steps in glaucoma therapy
Differential Forms in Algebraic Topology - Raoul Bott 2013-04-17

Developed from a first-year graduate course in algebraic topology, this text is an informal introduction to some of the main ideas of

contemporary homotopy and cohomology theory. The materials are structured around four core areas: de Rham theory, the Čech-de Rham complex, spectral sequences, and characteristic classes. By using the de Rham theory of differential forms as a prototype of cohomology, the machineries of algebraic topology are made easier to assimilate. With its stress on concreteness, motivation, and readability, this book is equally suitable for self-study and as a one-semester course in topology.

Structural Analysis of Shells - E. H. Baker
1981

Return to Play in Football - Volker Musahl
2018-03-16

In this book, leading experts employ an evidence-based approach to provide clear practical guidance on the important question of when and how to facilitate return to play after some of the most common injuries encountered in football. Detailed attention is paid to

biomechanics, the female athlete, risk factors, injury prevention, current strategies and criteria for safe return to play, and future developments. Specific topics discussed in depth include concussion, anterior cruciate ligament and other knee injuries, back pathology, rotator cuff tears, shoulder instability, hip arthroscopy, and foot and ankle injuries. The chapter authors include renowned clinicians and scientists from across the world who work in the field of orthopaedics and sports medicine. Furthermore, experiences from team physicians involved in the Olympics, National Football League (NFL), Union of European Football Associations (UEFA), and Fédération Internationale de Football Association (FIFA) are shared with the reader. All who are involved in the care of injured footballers will find this book, published in cooperation with ESKA, to be an invaluable, comprehensive, and up-to-date reference that casts light on a range of controversial issues.

[Ant Colony Optimization](#) - Marco Dorigo

2004-06-04

An overview of the rapidly growing field of ant colony optimization that describes theoretical findings, the major algorithms, and current applications. The complex social behaviors of ants have been much studied by science, and computer scientists are now finding that these behavior patterns can provide models for solving difficult combinatorial optimization problems. The attempt to develop algorithms inspired by one aspect of ant behavior, the ability to find what computer scientists would call shortest paths, has become the field of ant colony optimization (ACO), the most successful and widely recognized algorithmic technique based on ant behavior. This book presents an overview of this rapidly growing field, from its theoretical inception to practical applications, including descriptions of many available ACO algorithms and their uses. The book first describes the translation of observed ant behavior into working optimization algorithms. The ant colony

metaheuristic is then introduced and viewed in the general context of combinatorial optimization. This is followed by a detailed description and guide to all major ACO algorithms and a report on current theoretical findings. The book surveys ACO applications now in use, including routing, assignment, scheduling, subset, machine learning, and bioinformatics problems. AntNet, an ACO algorithm designed for the network routing problem, is described in detail. The authors conclude by summarizing the progress in the field and outlining future research directions. Each chapter ends with bibliographic material, bullet points setting out important ideas covered in the chapter, and exercises. Ant Colony Optimization will be of interest to academic and industry researchers, graduate students, and practitioners who wish to learn how to implement ACO algorithms.

Decision Tools for Radiation Oncology -
Carsten Nieder 2014-03-13

A look at the recent oncology literature or a search of the common databases reveals a steadily increasing number of nomograms and other prognostic models. These models may predict the risk of relapse, lymphatic spread of a given malignancy, toxicity, survival, etc. Pathology information, gene signatures, and clinical data may all be used to compute the models. This trend reflects increasingly individualized treatment concepts, the need for approaches that achieve a favorable balance

between effectiveness and side-effects, and the goal of optimal resource utilization reflecting prognostic knowledge. In order to avoid misuse, it is important to understand the limits and caveats of prognostic and predictive models. This book provides a comprehensive overview of such decision tools for radiation oncology, stratified by disease site, which will enable readers to make informed choices in daily clinical practice and to critically follow the future development of new tools in the field.>