

April 2008

Sci-Tech Book News Reviews

Marie Fraties-Block

Follow this and additional works at: <https://jdc.jefferson.edu/scitechnews>

 Part of the [Physical Sciences and Mathematics Commons](#)

[Let us know how access to this document benefits you](#)

Recommended Citation

Fraties-Block, Marie (2008) "Sci-Tech Book News Reviews," *Sci-Tech News*: Vol. 62: Iss. 2, Article 12.
Available at: <https://jdc.jefferson.edu/scitechnews/vol62/iss2/12>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Sci-Tech News by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Sci-Tech Book News Reviews

Marie Fraties-Block, Selector



The following section consists of 100 book reviews selected from *Sci-Tech Book News*, reprinted with the permission of Book News Inc. This review journal is published four times a year, each issue reviewing over 2,000 new titles in the physical and biological sciences, mathematics, engineering, computer science, technology, and agriculture. For a sample issue and subscription information, contact Book News Inc. at 5739 NE Sumner Street, Portland, OR 97218. Phone: (503)281-9230; Fax: (503)287-4485; E-mail: booknews@booknews.com.

PSYCHOLOGY

BF637 2006-022400 0-8058-5780-X

The dark side of interpersonal communication, 2d ed.

Title main entry. Ed. by Brian H. Spitzberg and William R. Cupach.

Lawrence Erlbaum, ©2007 416 p. \$45.00 (pa)

The more we communicate the better off we are, right? Not if we are bullying, belittled or taking revenge, it seems. In this survey of the scholastic landscape, new academicians as well as authors of classic articles explore how dysfunctional interpersonal communication operates across a variety of settings, contents and contexts. These articles, which have been thoroughly updated for this edition to reflect new theories and findings, address the negative side of communication and the real reasons behind it, relational uncertainty as an obstacle and opportunity, avoidance and secrets, the strangeness of the self in cyberspace, communicating to hurt, complaints and criticism from a partner, teasing and bullying, infidelity, relational transgressions (including expressing hurt, anger and forgiveness), vengeful behavior, aggression and psychological abuse, child abuse as an expression of a lack of safe ground, and adolescent-to-parent abuse.

BF698 2007-016884 978-0-471-22881-3

Handbook of personality assessment.

Weiner, Irving B. and Roger L. Greene.

John Wiley & Sons, ©2008 677 p. \$125.00

Weiner (psychiatry, behavioral medicine, University of South Florida) and Greene (Pacific Graduate School of Psychology) provide basic instruction in the administration, scoring, and interpretation of the most widely used personality assessment instruments. They also review and comment on contemporary clinical and research literature concerning the scientific status and practical applications of these measures. The text is addressed to two primary groups of readers: graduate students who are learning about personality assessment methods

and issues, and professional psychologists who need a refresher. Part I covers general considerations in personality assessment, including procedural aspects and psychometric foundations. Part II presents information on the most widely used self-report personality inventories, and Part III presents information on what have traditionally been called "projective," or performance-based, measures. Part IV provides sample interpretive reports generated by computer programs for six different tests.

ETHICS

BT695 2006-032382 978-1-57075-711-2

A moral climate; the ethics of global warming.

Northcott, Michael S.

Orbis Books, ©2007 336 p. \$20.00 (pa)

He hears—sometimes explicitly and sometimes as an undertone—that once the engines of industry are decoupled from fossil fuel—a mere technical fix—the environmental problem will be solved. That is a serious misreading of the crisis, says Northcott (ethics, U. of Edinburgh), because global warming is the symptom of the problem not its cause. Among his perspectives as a priest and an ethicist are energy and empire, ethical emissions, mobility and pilgrimage, and faithful feasting.

ENVIRONMENT

GB622 2007-024968 978-1-4200-6414-8

Wetland and water resource modeling and assessment; a watershed perspective.

Title main entry. Ed. by Wei Ji. (Integrative studies in water management and land development)

CRC / Taylor & Francis, ©2008 280 p. \$99.95

Poyang Lake is the largest fresh water lake in China. The marshes, grasslands and alluvial flood plains in its watershed serve a wide diversity of plants and animals, particularly migratory birds, attracting scientists and scholars from around the world to study it and its conservation. Drawn

from those presented at a workshop held in June 2005 at Jiangxi Normal U. and also from other expert sources, these 21 papers report on water resource modeling and assessment at a wetland level, many using the lake as a case study. Topics include models for jurisdictional identification, expert system-based imagery, mapping of specific vegetation, spectral angle mapping, long-range supply and demand, reforestation, stream flow simulation and base flow separation, variations in nutrients and chemicals, erosion, and assessment of risk, human impact, and pollution. Includes a very interesting paper on a new method of wetland and landscape study based on sound.

GE149 978-92-807-2836-1

Global environmental outlook 4; environment for development.

Title main entry. United Nations Environment Programme
UN Environment Programme, ©2007 540 p.
\$80.00 (pa)

GEO-4 results from international cooperation: some 400 individual scientists and policymakers and some 50 GEO Collaborating Centres were among the participants. This is the 20th anniversary of the report by the World Commission on Environment and Development. It differs fundamentally from the previous report in 2002 in that the discussion is no longer whether climate change is occurring; the discussion is now about bringing 190 nations together to counter and cope with the changes. In an attractively designed format (color graphs & maps, sidebars, glossary & index included), a substantial amount of information for planners and advocates is presented with regard to state-and-trends data for 1987-2007, regional perspectives, human dimensions, the outlook (towards 2015 and beyond), and options for action.

GE197 2007-024091 978-1-59485-039-4

Wake up and smell the planet; the nonpompous, nonpreachy Grist guide to greening your day.

Title main entry. Ed. by Brangien Davis and Katharine Wroth.

Skipstone, ©2007 175 p. \$14.95 (pa)

Based on the Grist website (www.grist.org), this compact guide to making environmentally-responsible choices on a daily basis is an irreverent complement to Al Gore's PowerPoint approach. Davis (a writer/editor in Seattle) and Wroth (an environmental writer) discuss sustainable alternatives to everything from autos to dog, diaper, and electronic waste. Skipstone is an imprint of Mountaineers Books.

GE300 978-1-84564-088-0

Ecosystems and sustainable development VI; proceedings.

International conference on Ecosystems and Sustainable Development (6th: 2007: Coimbra, Portugal) Ed. by E. Tiezzi et al. (WIT Transactions on Ecology and the Environment; v.106)

WIT Press, ©2007 563 p. \$385.00

A September 2007 conference encouraged interdisciplinary communication between scientists, engineers, and professionals working in ecological systems and sustainable development. Papers from the conference describe research related to different aspects of ecosystems and sustainable development, including physical sciences and modeling. Material is grouped in 13 sections on ecosystem modeling, environmental management, mathematical and system modeling, environmental risk, natural resources management, sustainability indicators, ecological areas studies, energy and the environment, socio-economic factors, sustainable tourism, soil and agricultural issues, sustainable waste management, and water resources. There is no subject index. The US Office of WIT Press is Computational Mechanics.

GT2845 2007-032334 978-0-86547-690-5

The dirt on clean; an unsanitized history.

Ashenburg, Katherine.

North Point Press, ©2007 358 p. \$24.00

The author of *The Mourner's Dance: What We Do When People Die* turns her attention to the history of bathing (or not), tracing notions of personal hygiene from well-bathed ancient Romans and unwashed saints to current fixations on dazzling teeth on the one hand, and on the other, the hygiene hypothesis that early exposure to germs protects against disease. Ashenburg entertainingly shows in text and images that cleanliness is a cultural construct. The book was originally published in 2007 by Alfred A. Knopf, Canada.

ECONOMICS

HC110 2007-009560 978-1-84542-912-6

The technology imperative.

Tassey, Gregory.

Edward Elgar Publishing, ©2007 329 p.
\$135.00

Tassey, Senior Economist at the National Institute of Standards and Technology, analyzes the roll of technology in the economy, arguing that the model upon which many industrialized nations have based their behavior is out of date. He states that the rise of technology-based economies in

Third World countries and the outsourcing of production to those countries mean that previous economic leaders, like the United States, are left with no actual products. One solution to this is to change the recent trend of funding only applied research and development and to begin investing in the experimental work that produced the technological breakthroughs of the past. He argues that the way business thinks of technology needs a radical reevaluation. The writing is accessible to the educated lay person. Tasse's work is timely and thought provoking.

HC110 2007-019982 978-1-933392-15-8

Exposed; the toxic chemistry of everyday products; who's at risk and what's at stake for American power.

Schapiro, Mark.

Chelsea Green Publ. Co., ©2007 216 p. \$22.95

European Union countries have surged ahead of the U.S. in setting "greener" consumer product safety standards, and China may be next, asserts the editorial director of the Center for Investigative Reporting in San Francisco. Focusing on products including phthalate-containing plastics that may feminize boys and e-waste, Shapiro (coauthor, *Circle of Poison: Pesticides and People in a Hungry World*) explains the global politics and economics behind different market standards.

HC462 2007-007144 978-0-415-43331-0

Accelerating Japan's economic growth; resolving Japan's growth controversy.

Title main entry. Ed. by F. Gerard Adams et al. (Routledge studies in the growth economies of Asia; 74)

Routledge, ©2007 182 p. \$150.00

Once considered unstoppable, Japan's economy is only recently emerging from the "lost era," a 15-year period of stagnation and deflation. Now with an aging population, high public debt and mature economy many say Japan cannot sustain the growth rates it enjoyed even 20 years ago. This collaborative work is based on studies conducted to ascertain Japan's potential for future growth. The articles describe the growth record in Japan and the challenges in economic growth, the influence of new technologies and globalization, information technology and productivity growth, information and communications technology, revisiting the Japanese industrial organization, conducting simulation studies, creating new politics, making new estimates and developing models of growth.

PRODUCTION, INDUSTRY, COMMERCE

HD30 2006-041797 0-8311-3275-2

Sustaining continuous innovation through problem solving.

Armstrong, Stephen C.

Industrial Press, ©2006 419 p. \$49.95

Armstrong (chief executive officer of AMGI, an international strategic management consultancy) describes business techniques aimed at process management and problem solving to achieve continuous innovation. The core of the book presents a methodology of continuous innovation that includes researching customer needs, defining the "As Is" enterprise process, developing measures, determining the improvement objectives and schedule, developing best practice for effective process improvement teamwork, formulating and evaluating solutions, documenting and implementing solutions, and continuous monitoring.

HD30 2007-035572 978-1-57387-309-3

Intranets for info pros.

Title main entry. Ed. by Mary Lee Kennedy and Jane Dysart.

Information Today, Inc., ©2007 286 p. \$39.50 (pa)

A group of business and technology consultants considers the general function and implementation of internal knowledge and information-sharing environments enabled by an intranet. The 11 chapters explore governance roles, levels of collaboration, content management, a simplified writing style for online content, corporate portals, intranet search engines, and the information architecture discipline.

HD69 2007-027374 978-0-470-22682-7

The Wiley guide to project technology, supply chain, & procurement management.

Title main entry. Ed. by Peter W.G. Morris and Jeffery K. Pinto. (The Wiley guides to the management of projects)

John Wiley & Sons, ©2007 380 p. \$50.00 (pa)

For managers and graduate students, Morris (civil engineering, UMIST, Manchester, UK) and Pinto (business, Pennsylvania State U., Erie) bring together 15 chapters that outline the supply chain and delivery cycle of a project, and technology management issues relating to modeling, design, and verification. They focus on the management of technical issues and the procurement of third party resources. Specific topics include requirements and verification, project design, concurrent engineering, process and product modeling, safety, health, and environmental

issues, innovation, Integrated Logistics Support, and tender, configuration, contract, and change management. Chapter authors are academics, practitioners, and researchers, in different disciplines from construction to information technology, from the US and Europe.

HD9696 2007-022426 978-1-59904-135-3

Cost estimation techniques for web projects.

Mendes, Emilia.

IGI Publishing, ©2008 412 p. \$99.95

Mendes (U. of Auckland, New Zealand) provides Web companies, and researchers and students in the areas of Web development, Web engineering, project management, and software engineering with the knowledge about Web effort and cost estimation that is necessary for successful Web project management. The step-by-step guidelines on how to use and compare several effort estimation techniques—stepwise regression, case-based reasoning, and classification and regression trees—may help companies improve their current effort estimation practices, and help researchers and students understand the process that needs to be carried out to estimate development effort. The text includes detailed chapters on principles of statistics and empirical studies to provide readers with additional knowledge useful for Web effort and cost estimation, and within the context of Web engineering.

CRIMINOLOGY

HV8079 2007-029431 978-0-8493-8328-1

Cyber forensics; a field manual for collecting, examining, and preserving evidence of computer crimes, 2d ed.

Title main entry. Ed. by Albert J. Marcella and Doug Menendez.

Auerbach Publications, ©2008 498 p. \$69.95

In this update of the 2002 edition, veteran information technology auditors and management consultants offer advice on keeping up with cyber criminals who keep pace with technological advances. Marcella and Menendez cover the cyber forensic investigation process for corporate and personal securities areas. Appended material includes forensic resources, management assessment questions for preparedness to conduct investigations, a flowchart for the seizure of a personal digital assistant, best practices recommendations, principles for electronic document production, federal rules of civil procedure involving e-discovery amendments, and sample computer and cellular telephone search warrants. Distributed by Taylor & Francis.

LAW

K1519 2007-047185 978-0-7355-6266-0

Biotechnology and pharmaceutical patents; law and practice; 2v. (CD-ROM included)

Gross, Marc S. et al.

Wolters Kluwer, ©2008 -- p. \$375.00

Biotechnology patent law and pharmaceutical law (referred to in this text as "BioPharma") are relatively new concepts, and there's a dearth of information on its practical aspects. This two-volume handbook (bound as 3-ring binders) fills the gap, presenting summaries of the law with a focus on practical advice and focus on the specific aspect or type of case the reader intends to research. Chapters are devoted to the novelty requirement, nonobviousness, formal standards of patentability, restriction and double patenting, definitions of inequitable conduct, how to write a BioPharma patent application, how and when to file it, identifying the inventors, and post-grant procedures, among other topics. An initial chapter describes specific examples of patentable subject matter, including living things. Vol.2 describes how to obtain or enforce BioPharma patents and their regulations in Canada, China, the EU, India, and Japan.

KF1890 2007-028030 978-0-470-22392-5

Lifecycle of a technology company; step-by-step legal background and practical guide from startup to sale.

Miller, Edward L.

John Wiley & Sons, ©2008 300 p. \$90.00

When a technology company becomes "mature," should stakeholders switch off its lights? Attorney Miller thinks not, but does caution managers, corporate lawyers and entrepreneurs to take care of the firm responsibly at each of its life stages, ranging from the start-up phase. First financing of the venture, intellectual property protection, private placements, initial public offerings, public company regulation, mergers and acquisitions. Miller gives legal matters to consider at each, form the choice of entity and employment agreements of the start up to the basics of securities regulation and structuring considerations of mergers and acquisitions. The result is a handy and concise first reference for those going through the throes as well as a fine classroom text filled with examples and directions.

EDUCATION

LB1028 2007-024155 978-1-59904-865-9

Handbook of research on instructional systems and technology; 2v.

Title main entry. Ed. by Terry T. Kidd and Holim Song.

Information Science Reference, ©2008 1037 p. \$495.00

Kidd (U. of Texas Health Science Center School of Public Health) and Song (Texas Southern U.) have edited 67 chapters on various aspects and case studies of instructional technology, with chapters on the design and implementation of a variety of systems for e-learning. The chapters report on the literature and actual programs in a clearly-organized, descriptive manner, with an abstract, list of references, and list of key words and their definitions attached. Some of the chapter topics include technology use in an online MBA program, teaching Shakespeare online, achieving classroom excellence in a virtual classroom, and issues of WebQuest development. The contributors teach curriculum and instruction, educational technology, mathematics, and related topics at universities and libraries worldwide; some are graduate students.

SCIENCE (GENERAL)

Q125 2007-280568 978-1-55111-770-6

A history of science in society; a reader.

Title main entry. Ed. by Andrew Ede and Lesley B. Cormack.

Broadview Press, ©2007 470 p. \$49.95 (pa)

Over 90 readings, most short excerpts from longer works, provide a broad range of perspectives on the role and place of science in society. They are arranged chronologically beginning with the pre-Socratic origins of natural philosophy and progressing to the late 20th century. The anthology could be used in courses on the history or philosophy of science.

Q141 2007-031384 978-0-684-31320-7

New dictionary of scientific biography; 8v.

Title main entry. Ed. by Noretta Koertge.

Gale, ©2008 4400 p. \$995.00

★★★★ A notable event: under the auspices of the American Council of Learned Societies, Scribners published the *DSB* in 16 volumes between 1970 and 1980; it was reprinted in 1981 in eight volumes. The *New DSB* must be thought of as a supplement to the original at least in its electronic form; the *Complete Dictionary of Scientific Biography* comprises the entire original together with the very considerable new material that is unique to

this set. The new work carries 800 new articles including 500 dealing with the lives and work of subjects deceased since 1980, as well as 75 on scientists missed in the original including those whose work has subsequently been recognized for its enduring contribution. The electronic set offers postscripts to 225 articles in *DSB*; its isbn is (978-0-684-31559-1), and it is priced by number of users (query 800-877-4253). The *DSB* is held by some 2,300 OCLC libraries and is distinguished by respectful inclusion in the, also new, *Resources for College Libraries*, *Books for College Libraries*, 3d ed., *Walford's, Guide to Reference Books*, and *Public Library Catalog*—an international supernova that must be in any collection aspiring to excellence in the sciences.

Q141 2007-023966 978-0-8160-6695-7

A to Z of women in science and math, rev. ed.

Yount, Lisa. (A to Z of women)

Facts On File, Inc., ©2008 368 p. \$60.00

This reference contains profiles of 195 women who have contributed to math and science, including chemists, astronomers, environmental scientists, geologists, and others. Women were chosen based on the importance of their contribution, their fame, and to present a diverse group. Examples are Rachel Carson, Jane Goodall, Hildegard of Bingen, Marie Curie, and Margaret Mead. New profiles in this edition include Fan Rong Kung Chung, Temple Grandin, Reatha Belle Clark King, Vandana Shiva, Maxine Singer, Maxine Tharp, Nalini M. Nadkarni, Adriana C. Ocampo, Sherry Turkle, and Florence Muringi Wambugu. The bibliography has also been updated. The intended audience is readers in high school and older interested in women's studies, science, and math. Yount is a writer and editor of many books.

Q190 2007-011628 978-0-415-38381-3

Science images and popular images of the sciences.

Title main entry. Ed. by Bernd Hüppauf and Peter Weingart. (Routledge studies in science, technology and society; 8)

Routledge, ©2008 333 p. \$120.00

Presented in earlier form at a conference held in November, 2003 at New York University called "Images of Science and the Scientist in Visual Media", the 15 articles of this collection address aspects of the representation of science in various media, especially in film (with five articles). Topics include the role of images in science and mathematics, the historiography of science images presented to the public, image science, and science in clipart cartoons and internet photos. Many of the contributors are art

historians, others teach communication, history of technology and science, linguistics, and hard sciences at universities in Europe and the U.S.

Q336 2007-024492 978-1-59140-646-4

Biologically inspired artificial intelligence for computer games.

Title main entry. Ed. by Darryl Charles et al.

Medical Information Science Reference, ©2008 262 p. \$99.95

Computer games are often played by a human player against an artificial intelligence software entity. Charles (University of Ulster, Ireland) reviews several strands of modern artificial intelligence relevant to creating games that respond as a human player would as he or she learns to play a game. Areas explored include supervised and unsupervised artificial neural networks, evolutionary algorithms, artificial immune systems, and swarms. Case studies demonstrate how each method can be applied to computer games. The book will be of interest to the academic research community working with advanced artificial intelligence, and to the games programming community. Medical Information Science Reference is an imprint of IGI.

MATH, COMPUTERS

QA76 2007-022234 978-1-59904-762-1

Intellectual property protection for multimedia information technology.

Title main entry. Ed. by Hideyasu Sasaki.

Information Science Reference, ©2008 462 p. \$180.00

This collection of 21 articles considers the needs of scholars, managers, researchers and lawyers as well as social issues, giving theoretical and practical frameworks, solutions to social issues and surveys. Subjects include digital library protection through patented retrieval processes, intellectual property rights from theory to practical implementation, encryption technology, the effectiveness of masking models and watermarking, a novel approach to damageless watermark extraction, perceptual data hiding in still images, regulation of abuse of personal data, challenge-response mechanisms, combinations of security technologies, device-driven computers, open content licenses as creators of communities, e-commercial and digital libraries, intellectual property protection and standardization, using patent data for evaluation of standard-setting organizations, "submarine" patents, legal protection of the web page as a database, steganography and steganalysis, intellectual property protection in

multimedia grids, and secure image archiving.

QA76.59 2007-024493 978-1-59904-871-0
Handbook of research on user interface design and evaluation for mobile technology; 2v.

Title main entry. Ed. by Joanna Lumsden.

Information Science Reference, ©2008 1132 p. \$495.00

In this two-volume set, Lumsden (National Research Council of Canada, Institute for Information Technology—e-Business) collects 64 research papers addressing the complex issues surrounding the design and evaluation of mobile device user interfaces, which includes physical environment, social context, and the multi-tasking behaviors of users. The papers are organized into sections on user interface design for mobile technologies, novel interaction techniques for mobile technologies, assistive mobile technologies, evaluation techniques for mobile technologies, and case studies. Examples of specific topics include one-handed use of mobile devices, human factors problems of wearable computers, collaborative learning in a mobile technology supported classroom, tools for rapidly prototyping mobile interactions, improving stroke-based input of Chinese characters, unobtrusive movement interaction for mobile devices, designing mobile applications to support mental health interventions, mobile design for older adults, trends in adaptive interface design for smart wheelchairs, cognitive models as usability testing tools, theory and application of the privacy regulation model, mobile evaluations in a lab environment, visualization of meeting records on mobile devices, and evaluating learner satisfaction in a multiplatform e-learning system.

QA76.76 2007-273943 0-596-52740-3

Dynamic HTML; the definitive reference, 3d ed.

Goodman, Danny.

O'Reilly Media, Inc., ©2007 1307 p. \$59.99 (pa)

The five primary chapters in this reference define tags, attributes, objects, properties, methods, and events for HTML, XHTML, CSS, DOM, and core JavaScript. Cross-references index HTML attributes, DOM properties, DOM methods, and DOM events, and appendices list character entities, editable content commands, and DTD support. The third edition covers Ajax, DOM Level 3, and Web Forms 2.0.

QA76.76 2007-011156 978-0-7637-4137-2
Building an intelligent Web; theory and practice. (CD-ROM included)

Akerkar, Rajendra and Pawan Lingras.

Jones & Bartlett, ©2008 326 p. \$93.95

This graduate textbook applies data mining techniques to extract implicit and unknown information from the massive collection of documents available on the web, and suggests alternative approaches to analyzing web site usage, content, and topology. The CD-ROM contains public domain software package links and datasets for practicing data mining, web mining, and information retrieval tasks.

QA76.9 2007-274441 978-0-596-52833-1
Access 2007 for starters; the missing manual.

MacDonald, Matthew. (The missing manual)

O'Reilly Media, Inc., ©2007 377 p. \$19.99

Assuming no previous experience, this guide walks through the process of opening a new Access database, adding tables to store information, sorting and filtering data, setting validation rules, and linking tables together. The second half of the book discusses the different types of queries, reports, forms, and export operations.

QA76.9 978-0-7695-3018-5

Data mining; proceedings.

IEEE International Conference on Data Mining (7th: 2007: Omaha, NE) Ed. by Naren Ramakrishnan et al.

Computer Society Press, ©2007 771 p. \$312.00 (pa)

An October 2007 conference featured tutorials on practical relational data community generation, mining for software reliability, cluster detection in moderate-to-high dimensional data, and methods and applications of contrast data mining. Regular and short papers from the conference are collected here. Some topics explored include cross-mining binary and numerical attributes, using burstiness to improve clustering of topics in news streams, and training conditional random fields by periodic step size adaptation for large-scale text mining. Other subjects include finding cohesive clusters for analyzing knowledge communities, sample detection for maximal diversity, local probabilistic models for link prediction, language-independent set expansion of named entities using the Web, and incorporating user provided constraints into document clustering. There is no subject index.

QA76.9 2007-034116 978-0-8493-8522-3
Data mining methods and applications.

Title main entry. Ed. by Kenneth Lawrence et al.

Auerbach Publications, ©2008 309 p. \$99.95
 Practitioners in academia and business report their research on techniques and applications of data mining, which is increasingly popular as organization become inundated with data. Techniques addressed include ensemble strategies for neural network classifiers, and data cleansing with independent component analysis. Applications are in such areas as education, health care, consumer modeling, and product purchase. Distributed in the US by Taylor and Francis.

QA76.9 2007-925705 978-0-89871-630-6
Data mining; proceedings.

SIAM International Conference on Data Mining (7th: 2007: Minneapolis, MN) Ed. by Chid Apte et al. (SIAM proceedings series)

SIAM, ©2007 648 p. \$169.00 (pa)

Papers from an April 2007 conference are presented here, showcasing current research in areas including statistical learning, data analytics for marketing and decision support, mining time-evolving data using tensors, dimensionality reduction for data mining, text mining, and biomedical informatics. Some specific subjects include prevention of information leaks in e-mail, attack-resilient geometric data perturbation, active learning of constraints for semi-supervised text clustering, and clustering by weighted cuts in directed graphs. Further topics examined include topic models over text streams, a localized support vector machine and its efficient algorithm, and probabilistic joint feature selection for multi-task learning. There is no subject index.

QA76.9 2007-044101 978-1-59904-295-4
End user computing challenges and technologies; emerging tools and applications.

Title main entry. Ed. by Steve Clarke. (Advances in end user computing series)

Information Science Reference, ©2008 332 p. \$180.00

The desires of end users should be the most important factors in the design process, and this collection of 16 papers describes how developers determine and used those needs to create models in training and products. Subjects include ethical behavior models, users' privacy and perceptions of risk online, multi-level computer self-efficacy and its effect on computer training, return on investment in enterprise architecture, technology acceptance models in researching biometric devices, integrative models for intentions to use information technology,

organization of user development, benefits and risks of user web development, meta-design in user development, semantic composition in web portal components, privacy statements in web interactions, third-party credibility in e-retailing, group leaders and communications modes in group performance, group differences in gender, technology acceptance models for older consumers, and ergonomics as a fact or a fad.

QA76.9 2007-023451 978-1-59904-645-7

Successes and new directions in data mining.

Title main entry. Ed. by Florent Messegia et al.

Information Science Reference, ©2008 369 p. \$180.00

This work looks at theoretical frameworks, challenges, and potential and existing solutions concerning knowledge extraction, with emphasis on real-world applications. Fuzzy set theory, clustering algorithms, semi-supervised clustering, modeling and managing data mining patterns, and sequence mining are some of the areas explored. Specific topics covered include mined patterns for XML query answering, deterministic motif mining in protein databases, data mining and knowledge discovery in metabolomics, handling local patterns in collaborative structuring, and pattern mining and clustering on image databases. The book will be useful as a reference for researchers, practitioners, and students in fields related to data mining and data warehousing. Messegia is affiliated with Project AxIS-INRIA, France.

QA76.9 2007-037720 978-1-59904-960-1

Data mining and knowledge discovery technologies.

Title main entry. Ed. by David Taniar. (Advances in data warehousing and mining; v.2, 2007)

IGI Publishing, ©2008 369 p. \$99.95

The first four chapters in this collection propose association rules for multidimensional data, XML data, web data, and interestingness measures. The next six articles explore fuzzy clustering algorithms, a radial basis function kernel for k-means clustering, privacy issues in kNN classification, the discovery of actionable knowledge, and model free data mining. The final four chapters apply data mining to business problems, bioinformatics, social sciences, and learning.

QA154 2007-939902 978-0-495-55403-5

College algebra, 7th ed.

Kaufmann, Jerome E. and Karen L. Schwitters.

Brooks/Cole Publishing, ©2009 729 p. \$140.95

★★★★ This text is for students who need a college algebra course as a prerequisite for the calculus sequence or for the finite math/calculus sequence, or that satisfies a liberal arts requirement. Four major ideas unify the text: solving equations and inequalities, solving problems, developing graphics techniques, and developing and using the concept of a function. The text presents basic concepts of algebra in a straightforward way, and uses examples drawn from real-world situations that students can identify with. New features in this seventh edition include chapter objectives, concept quizzes, and worked examples, plus new problems. Chapter 10 of the previous edition has been removed because most of the topics covered in it are typically taught in a liberal arts math course and not in College Algebra. The text has been cited in *Resources for College Libraries*. The authors are affiliated with Seminole Community College.

QA188 2007-024691 978-0-471-74869-4

A matrix handbook for statisticians.

Seber, George A.F.

Wiley-Interscience, ©2008 559 p. \$110.00

Seber (statistics emeritus, U. of Auckland) takes a topical rather than mathematical development approach and includes many references to the theory behind the methods and applications of the methods. Seber covers vectors, vector spaces, convexity, rank matrix functions (inverse, transpose, trace, determinant and norm), related matrices (including complex and Hermitian), eigenvalues, eigenvectors, singular values, generalized inverses, special matrices, non-negative vectors and matrices, positive definite and non-negative definite matrices, special products and operators, inequalities, linear equations, partitioned matrices, patterned matrices, factorization of matrices, differentiation, Jacobians, matrix limits (including sequences and series), random vectors and matrices, inequalities for probabilities and random variables, majorization, optimization and matrix approximation. Each chapter includes a definition followed by a list of results, a short list of references to related topics in the volume, one or more references to proofs, and references to applications. The result is a well-balanced text that also serves as a professional reference.

QA273 978-0-471-69693-3

Probability and statistical inference, 2d ed.Bartoszynski, Robert and Magdalena Niewiadomska-Bugaj. *Wiley-Interscience*, ©2008 647 p. \$125.00

This text for advanced undergraduate and graduate-level courses in probability and statistical inference introduces key probability and statistical concepts through non-trivial, real-world examples and promotes the development of intuition rather than simple application. Readers are encouraged to recognize and understand the "why," not just the "how," behind the concepts, theorems, and methods of statistics. This second edition features coverage of recent advancements in computer-intensive methods, such as bootstrap and permutation tests and bootstrap confidence intervals. It includes a new chapter on random samples, and treatment of survival and hazard function, methods of obtaining estimators, and Bayes estimating. Bartoszynski taught statistics at The Ohio State University. Niewiadomska-Bugaj teaches statistics at Western Michigan University.

QA279 2007-017347 978-0-471-72756-9

Design and analysis of experiments, 2d ed.; v.1: Introduction to experimental design.

Hinkelmann, Klaus and Oscar Kempthorne. (Wiley series in probability and statistics)

Wiley-Interscience, ©2008 631 p. \$120.00

The second edition of this textbook and reference continues the aims of the 1st, with a focus on the basic ideas and principles of experimental design, with the ultimate goal being a thorough foundation for the more theoretical principles found in v.2, *Advanced experimental design* (sold separately). New to the 2d ed. is a greater emphasis on the practical aspects involved in putting together an experiment. The sections on blocking have been expanded, and the discussion of repeated measures is now expanded to its own chapter. Numerical examples using SAS have been added to most chapters. Hinkelmann is emeritus in statistics at Virginia Polytechnic Institute and State U.; Kempthorne (d.2000) was formerly emeritus at Iowa State U.

ASTRONOMY

QB820 8-3-527-40671-5

Extrasolar planets; formation, detection and dynamics.

Title main entry. Ed. by Rudolf Dvorak.

Wiley-VCH, ©2008 87 p. 135.00 (pa)

Dvorak (Institute of Astronomy in Vienna, Austria) presents 11 review papers describing

recent research in the detection and analysis of extrasolar planets (planets orbiting stars other than the sun). Topics addressed by the papers include planetary masses and orbital parameters from radial velocity measurements, terrestrial planets in extrasolar planetary systems, mission requirements in the search for extrasolar planets, possible detection of biomarkers indicating the presence of life on extrasolar planets, the formation of resonant planetary systems, impact of stellar activity on the evolution of planetary atmospheres and habitability, dynamics of the extrasolar planetary, planets in double stars, the transit method of extrasolar planet detection and analysis, US programs and space missions for extrasolar planet research, and habitable zones in extrasolar planetary systems.

PHYSICS

QC16 2007-028443 0-9747077-7-5

Uncle Phil and the atomic bomb.

Abelson, John and Philip H. Abelson.

Roberts & Company Publishers, ©2008 137 p. \$25.00

While most of us know about the Manhattan Project, few can recall efforts by the US Navy at the Naval Research Laboratory in Washington DC in its support. Led by the very young Philip (hence "Uncle Phil") Abelson, the lab developed the liquid thermal diffusion process for separating fissionable from nonfissionable uranium. This was only the first of Abelson's accomplishments. In a very effective combination of family oral history, memories and private papers, John Abelson (biology emeritus, California Institute of Technology), nephew of Philip, closely tracks his uncle's work on the atom bomb and nuclear submarines, his academic career and his decades-long editorship of *Science* magazine. The result is a portrait of a dedicated scientist with a passion for the truth and the ability to be at the right place at the right time with the right skills. The younger Abelson provides a wealth of archival and family photographs.

QC23 2007-026996 978-0-8053-2736-6

Physics for scientists and engineers; a strategic approach, with modern physics, 2d ed.

Knight, Randall D.

Addison-Wesley, ©2008 1418 p. \$176.00

Knight (California Polytechnic State University) establishes the basic language and concepts of motion, presents four applications of classical mechanics, extends the ideas of particles and energy to systems of liquids

and gases, and explains the behavior of waves, optics, electricity, magnets, and atoms. The second edition adds a chapter on cameras, microscopes, telescopes, and vision.

QC24 2007-034554 978-1-59102-590-0

The joy of physics.

Wiggins, Arthur W.

Prometheus Books, ©2007 390 p. \$26.95

Wiggins taught physics and other science courses at the college level for 35 years, and also co-authored both serious and silly books. Here he introduces fundamental concepts without relying on the language of mathematics. Instead he uses examples, analogies, and simple experiments, assuming readers to be responsible enough to conduct themselves safely, to be in possession of general knowledge about modern civilization, and to be able to acquire such equipment as a yo-yo and a shake-up flashlight.

QC176 2007-021734 978-1-84821-007-3

An introduction to nanosciences and nanotechnology.

Nouailhat, Alain.

ISTE Ltd., ©2008 206 p. \$95.00

Nouailhat (director of research, CNRS, Paris) prepares novices in the nanoworld, including those involved in quantum physics, molecular biology and electronics with a basic understanding of nanoscience and also describes applications of that science to fields of study such as materials, energy, devices, data management and life sciences. Nouailhat covers the basic facts from wave-corpulence duality and probability in the quantum world to the work of electrons and photons, the functionality of matter at the molecule level, quantum boxes, observing with photons and electrons, and applications such as nuclear magnetic resonance. He shows how software and hardware work together in the nanoworld, and how proteins and other elements of the living world respond. He describes new and upcoming applications and provides materials on policies and ethics guidelines for development.

QC773 2007-022927 978-0-941232-02-9

Inside box 1663, 2d ed.

Jette, Eleanor.

Los Alamos Historical Society, ©2007 253 p. \$29.00 (pa)

Post Office Box 1663 was the address for all of the scientists working in secret on the atomic bomb in the first years of the program. The author of this memoir was the wife of one of those scientists and she here shares her perspective on the personalities of the Los Alamos program in its

infancy and the somewhat surreal life they lived as part of a secret government weapons program.

CHEMISTRY

QD5 978-3-527-31293-1

Japanese—English chemical dictionary; including a guide to Japanese patents and scientific literature.

Title main entry. Ed. by Markus Gewehr.

Wiley-VCH, ©2008 662 p. \$215.00

Intended for researchers, patent attorneys working with Japanese patent applications, and translators working in the field of chemistry, this reference work is primarily a dictionary of Japanese scientific terminology and includes more than 15,000 entries. The dictionary is arranged to facilitate finding specific entries and translation for non-native Japanese speaking users. Entries include pronunciation in addition to translation. A general section offers an overview of the Japanese language, basic grammar principles, and characteristics of punctuation and other elements of the language for readers with limited knowledge of the language. It also discusses the mechanics of Japanese writing, scientific documents, and details of the Japanese patent process.

QD47 2007-927596 978-0-309-10533-0

The future of U.S. chemistry research; benchmarks and challenges.

Title main entry. Ed. by Committee on Benchmarking the Research Competitiveness of the United States in Chemistry et al.

National Academies Press, ©2007 149 p. \$47.00 (pa)

The research, analysis, and conclusions of this report were carried out by the members of the Committee on Benchmarking the Research Competitiveness of the United States in Chemistry and the Board on Chemical Science and Technology. Made up of chemists in academe and industry in the U.S., with two members in Switzerland and Belgium, both groups undertook an international benchmarking exercise to determine the standing of the U.S. performance in chemistry and to forecast future trends. Their report details the main characteristics of U.S. chemistry research; America's current leadership position in research in terms of journal article contributions, citations, and awards; and the key factors that influence leadership, including innovation and funding. Perhaps most important are the conclusions of the benchmarking study, which are not optimistic for America's continued leadership in the field. The volume includes several appendices, but no index.

QD96 2007-000587 978-0-8493-7393-0
Handbook of near infrared analysis, 3d ed.

Title main entry. Ed. by Donald A. Burns and Emil W. Ciurczak. (Practical spectroscopy; 35)

CRC Press, ©2008 808 p. \$229.95

This work explains how to use near-infrared (NIR) spectroscopy to perform analyses across a spectrum of disciplines. Following an introduction and background material, there is a general section on instrumentation and calibration. This is followed by a section on methods and development, and material on applications of NIR. This third edition contains new chapters on diffuse reflection theories, the calibration and validation of process sensors, and the NIR spectra of gases. New chapters highlight novel applications in the analysis of agro-forestry products, polymers, blood, nutraceuticals, and control serum. Non-traditional applications, such as counterfeit detection, are also discussed. There are new color images of NIR spectra, with a total of 400 b&w illustrations and photos. The book is intended for practicing chemists and spectroscopists in analytical, polymer, baking, petrochemical, beverage, pharmaceutical, and textile chemistry who are responsible for methods development and routine analyses. Burns is retired from Los Alamos Laboratory. Ciurczak works in the private sector.

QD261 978-3-527-31223-8
Reactions and syntheses; in the organic chemistry laboratory, 2d ed.

Tietze, Lutz F. et al.

Wiley-VCH, ©2007 582 p. \$95.00 (pa)

Tietze (organic and biomolecular chemistry, Georg-August University, Germany) presents a broad spectrum of modern synthetic methods in organic chemistry, encompassing transition metal catalyzed, biochemical, and enantioselective reactions, as well as total synthesis of natural products, pharmaceuticals, and agrochemicals. Experimental procedures are accompanied by retrosynthetic analyses, mechanistic discussions, and general information about the compounds described. Procedures are in sections on C-C bond formation, oxidation and reduction, heterocyclic compounds, and selected natural products. For this third edition, general information, such as safety, performance of chemical reactions, and instrumentation and apparatus, has been omitted, and methods for the formation and transformation of basic functional groups in organic compounds are not described. These deletions leave more room to

describe advanced synthetic methods, to include mechanistic aspects, and to incorporate total syntheses and retrosynthetic analyses. The book will be valuable for students and lecturers in chemistry, and for chemists in industry.

QD271 2007-019597 978-0-470-04961-7
Superelectrophiles and their chemistry.

Olah, George A. and Douglas A. Klumpp.

Wiley-Interscience, ©2008 301 p. \$125.00

Olah (organic chemistry, University of Southern California-Los Angeles) and Klumpp (chemistry, Northern Illinois University) discuss recent experimental and theoretical work in the field of superelectrophiles and their reactions. In addition to discussing the basics of this emerging field, they provide tools to help the reader apply the chemistry. They explain how to differentiate between electrophiles and superelectrophiles, discuss ways to increase electrophilic strength, and review the role of electrophilic salvation in chemical reactions as studied by kinetic investigations, spectroscopic studies, gas-phase studies, and theoretical methodologies. The book will be used as a reference for chemists in academia and research, industrial chemists in pharmaceutical and petrochemical fields, and graduate students studying inorganic and physical organic chemistry.

QD421 978-3-527-31521-5
Modern alkaloids; structure, isolation, synthesis and biology.

Title main entry. Ed. by Ernesto Fattorusso and Orazio Tagliatella-Scafati.

Wiley-VCH, ©2008 665 p. \$225.00

This book presents important aspects of modern alkaloid chemistry. Initially, the book concentrates on the structure and biology of bioactive alkaloids, then goes on to analyze new trends in alkaloid isolation and structure elucidation, and finally discusses the synthesis and biosynthesis of alkaloids. Section I describes the structures and biological activities of selected classes of terrestrial, marine, and neurotoxic alkaloids. Section II gives an account of modern techniques used for the detection and structural elucidation of alkaloids. Section III is divided into two parts on different methods for alkaloid synthesis and accounts of modern biosynthetic studies. The book will be useful as a reference for biochemists, organic and medicinal chemists, natural product chemists, pharmacologists, and those working in the pharmaceutical industry. Fattorusso and Scafati are both professors of organic chemistry at University of Naples "Federico II," Italy.

QD431 978-3-527-31741-7

Amino group chemistry; from synthesis to the life sciences.

Title main entry. Ed. by Alfredo Ricci.

Wiley-VCH, ©2008 394 p. \$190.00

Building on the 2000 book *Modern Amination Methods*, also edited by Ricci for Wiley-VCH, this text focuses not only on the C-N bond forming methodologies, but also on the role played by the amino function in those processes most closely related to the life sciences. Nine contributions by 16 international academics and researchers provide chemists with information about applications, detailing complex syntheses using the amino group as templates and modern techniques focusing on the introduction of the amino group. Coverage includes simple molecules highly efficient amination; catalytic C-H amination using nitrenes; nitroalkenes as amination tools; isocyanide-based multicomponent reactions as diverse amination tools; direct catalytic asymmetric Mannich reaction and surroundings; amino-based building blocks for the construction of biomolecules; aminated sugars, synthesis and biological activity; selective/N/-derivatization of aminoglycosides en route to new antibiotics and antivirals; and evolution of transition metal catalyzed amination reaction.

QD469 2007-040432 978-0-470-03735-5

A chemist's guide to valence bond theory.

Shaik, Sason S. and Philippe C. Hiberty.

Wiley-Interscience, ©2008 316 p. \$100.00

Shaik (computational quantum chemistry, Hebrew U., Jerusalem) and Hiberty (Centre National de la Recherche Scientifique, France) present a textbook for advanced undergraduate and graduate students, suitable also as a reference text for computational chemists, chemical physicists, and research chemists in organic and organometallic/inorganic chemistry concerned with reactivity and molecular structure. The authors provide a qualitative insight of valence bond (VB) theory and ways to apply the theory to the problems of bonding and reactivity in the ground and excited states of molecules. In addition, the text describes the main methods and programs available today for *ab initio* VB calculations, and how to plan and run VB calculations. The text requires a basic knowledge of quantum chemistry.

PHYSIOLOGY

QP144 978-90-868601-9-7

Dietary fibre components and functions.

Title main entry. Ed. by Hannu Salovaara et al.

Wageningen Academic Publishers, ©2007 345 p. \$127.00

Biologists, chemists, nutritionists, and technologists from research organizations and food and medicine industry gathered in Helsinki, Finland during June 2006 for a third international conference on dietary fiber and its health benefits. The 22 selected papers presented here reflect the gathering's theme of dietary fiber's multi-functional complex of components, discussing its whole journey—from synthesis in the plant through food processing, to its role in human health. Distributed in the US by Enfield.

QP551 2007-040344 978-1-58706-123-3

Cell-free protein expression.

Title main entry. Ed. by Wieslaw A. Kudlicki et al.

(Biotechnology intelligence unit)

Landes Bioscience, ©2007 224 p. \$149.00

Researchers mostly from corporate laboratories describe procedures and findings that mostly further the development of new products to increase corporate profit. Thus closes the circle. Their topics include insect-based cell-free protein expression, energetics in systems based on *Escherichia coli*, producing and characterizing membrane proteins, screening and protein immobilization using protein microarrays, and accelerated protein evolution using ribosome display.

QP772 2007-029059 978-0-470-13983-7

Vitamin D handbook; structures, synonyms, and properties.

Title main entry. Ed. by G.W.A. Milne and M. Delander.

Wiley-Interscience, ©2008 274 p. \$115.00

Researchers are finding that vitamin D plays a significant role in cellular phenomena beyond bone health. To further that research, Milne (a former senior researcher, National Institutes of Health) and Delander (a biotechnology consultant/MDs Research Library) have compiled a dictionary of the chemical names, synonyms, structures, and properties of some 1,000 vitamin D derivatives on which there are published but incomplete chemical and biochemical data in a growing database. Entries include Chemical Abstract Service (CAS) registry numbers, and are arranged by increasing molecular formula from $C_{15}H_{25}O_5$ to $C_{60}H_{93}O_6$. Indexing is by CAS registry number, vitamin D name, and synonym.

MICROBIOLOGY

QR115 2007-016819 978-1-55581-461-8

Microbial risk analysis of foods.

Title main entry. Ed. by Donald W. Schaffner. (Emerging issues in food safety)

ASM Press, ©2008 270 p. \$99.95

Analyzing risk from microbes in food is a growing industry partly because there is new computer technology waiting to be sold, and partly because, with the triumph of corporate globalization, food could be carrying microbes from anywhere in the world. Contributors from the US Food and Drug Administration and from universities and other agencies in North America and Europe, consider theories, approaches, methodologies, basic science, and one case study.

QR201 2007-004638 978-1-58829-518-7

Foodborne diseases.

Title main entry. Ed. by Shabbir Simjee. (Infectious disease)

Humana Press Inc., ©2007 540 p. \$149.00

This collection of monographs offers a broad overview of the microbiological pathogens and toxins associated with foodborne illness. It also discusses pathogenicity, clinical epidemiology, diagnosis, and treatment. Chapters also address alternatives to antibiotics, risk assessment, irradiation and other sanitation procedures, and molecular techniques for detecting pathogens. The final chapter addresses future directions in food safety from the perspective of the interrelationship between food safety and public and animal health, municipal water quality, industrial processes, and other issues. The reference work is intended for infectious disease specialists, microbiologists, and food safety scientists in industrial and research settings.

TOXICOLOGY

RA1270 2006-925688 1-58883-088-8

Nanotoxicology; interactions of nanomaterials with biological systems.

Title main entry. Ed. by Yuliang Zhao and Hari Singh Nalwa. (Nanotechnology book series)

American Scientific Publishers, ©2007 300 p. \$399.00

Zhao (The Chinese Academy of Sciences) and Nalwa (*Journal of Nanoscience and Nanotechnology*) collect 16 state-of-the-art review chapters on the risks and implications of exposure to nanomaterials, especially potential dangers of nanoparticles to human health and safety and the environment. The book summarizes the toxicological effects of and biological properties (in vitro and in vivo)

of a wide variety of man-made nanostructured materials, including metallic nanoparticles, metal oxide nanoparticles, dendrimers, quantum dots, and nanomedicines. In addition to covering the toxicological aspects of recognition, identification, and quantification of hazards of human exposure to various types of nanomaterials during manufacturing and application, the book also outlines possible medical and therapeutic benefits of nanomaterials for clinical diagnosis, drug delivery, disease treatment, and physiological and immunological mechanisms. The audience for the book includes those working in the fields of nanoscience and nanotechnology, biology, toxicology, chemistry, medicine sciences, public health, and standardization of nanotechnology. The book will also be of interest to policymakers developing regulatory frameworks in government departments and nanotechnology industries.

INTERNAL MEDICINE

RC200 2007-013008 978-0-07-141748-8

Sexually transmitted diseases, 4th ed.

Title main entry. Ed. by King K. Holmes et al.

McGraw-Hill, ©2008 2166 p. \$249.00 The third edition (1999) was designated in *Brandon-Hill* as both its "minimum core list" and "suggested for initial purchase" as essential to most medical libraries. The massive fourth edition of this reference updates the earlier versions with new treatment of topics in all areas, including socioeconomic impact and epidemiology, vulnerable populations, overview of STD care management, management of HIV infection, and the appendices on drug interaction and treatment guidelines. The volume contains a total of 108 chapters divided into 16 sections that address the history, social and psychological aspects, host immunity and molecular pathogenesis, sexually transmitted viral and bacterial pathogens, issues in reproductive health and pediatrics, and prevention and control. The international team of contributors to the edition includes 119 new authors and 3 new editors. The new edition now has an online version and color illustrations.

RC667 2007-020840 978-0-07-149928-6

Hurst's the heart, 12th ed.; 2v.

Title main entry. Ed. by Valentin Fuster, et al.

McGraw-Hill, ©2008 2540 p. \$199.00

With chief editors from the Mount Sinai Medical Center, Case Western Reserve U., U. of Texas Health Science Center, and the United Kingdom's Imperial College of London, this is the 12th edition of the respected multidisciplinary textbook on human cardiovascular disease. The text's two

volumes include 115 chapters organized into 17 sections covering the history and current global status of cardiovascular disease; foundations of cardiovascular medicine; evaluation of the patient; heart failure; cardiomyopathy and specific heart muscle diseases; rhythm and conduction disorders; syncope, sudden death, and cardiopulmonary resuscitation; coronary heart disease; systemic arterial hypertension; cardiopulmonary disease; valvular heart disease; congenital heart disease; pericardial diseases and endocarditis; anesthesia, surgery, and the heart; miscellaneous conditions and cardiovascular disease; diseases of the great vessels and peripheral vessels; and social issues and cardiovascular disease. For this new edition, international perspective has been added in the form of many more contributors from Europe. Other changes include the division of the chapter on hypertension into separate and more detailed treatments of epidemiology, pathophysiology, and diagnosis and treatment; extensive revisions of the material dealing with the human genome, cardiovascular practice guidelines, and imaging technology for assessing coronary and noncoronary atherosclerosis disease and plaque characterization; new material on American and European clinical practice guidelines; and updated references. The text is extensively illustrated. Cited in *Brandon-Hill* as one of the handful of indispensable medical classics.

TECHNOLOGY (GENERAL)

T11 2007-023386 978-0-472-03266-2

The best of technology writing 2007.

Title main entry. Ed. by Steven Levy.

U. of Michigan Press, ©2007 375 p. \$17.95 (pa)

Newsweek editor and tech writer Levy brings together a collection of essays, all previously published in magazines as disparate as *Atlantic Monthly* and *Daringfireball.net*. Rather than explaining what to do when the computer freezes or how to program a Blackberry, the essays are more about how people use technology. The styles range from journalistic to narrative. Some tell insiders' stories about dot.com companies. Others relate the frustrations that come with life on the Internet. Most are light in tone, assuring the reader that geeks have the same problems as the rest of us.

T55 2007-020689 978-0-8247-5040-4

Safety management; a guide for facility managers, 2d ed.

Gustin, Joseph F.

CRC / Taylor & Francis, ©2007 298 p. \$99.95

Gustin, a regulatory compliance consultant, offers an accessible guide to the world of safety planning and compliance, OSHA inspections, workplace violence, ergonomics, and other related areas. This second edition provides updated statistics, a cross-comparison of old and new OSHA standards, an update on employer compliance requirements to ADA, discussion of new ergonomics standards, and explanations of recent revisions to OSHA workplace inspection and investigation procedures and record-keeping rules. Appendices provide a 45-page directory of sources, an OSHA chronology, and 23 pages of checklists. The book will be used by facility managers, safety compliance officers, risk managers, human resources managers, and supervisors.

T56 2007-002014 978-0-566-08805-6

The essentials of project management, 3d ed.

Lock, Dennis.

Gower Publishing, ©2007 204 p. \$34.95 (pa)

Lock boils down the concepts from his larger volume *Project Management* from 2007, summarizing the key principles and techniques of project management, from defining the task and estimating costs to implementing the plan and managing changes. The ninth edition of that text has been rewritten and reorganized to follow the life cycle of a typical project, with this volume following the changes. It has a larger format and new topics, including cash flow management and project closure, has a chapter on risk management, and omits the gantry project. The book is meant for those new to the field, or business school students. Lock is a freelance writer who specializes in project management. Distributed by Ashgate.

T57 2007-019976 978-0-8493-9721-9

Operations research and management science handbook.

Title main entry. Ed. by A. Ravi Ravindran. (Operations research series)

CRC / Taylor & Francis, ©2008 -- p. \$129.95
Business and manufacturing today require sophisticated techniques to stay competitive. The handbook provides a number of models for various aspects of operations and management. Ravindran (industrial and management engineering, the Pennsylvania State University)

has assembled highly technical articles on every aspect of business. The first section covers the creation of models for different situations. It includes among other things, linear and non-linear algorithmic programming, inventory management and using stochastic models to predict the likelihood of several possible outcomes. The second half of the book provides practical applications of these models in product management, quality control, reliability, production systems, energy systems, airline optimization, financial engineering, chain management, e-commerce, water resources and the military. The conclusion discusses possible future applications, the impact of the internet and emerging opportunities. To fully appreciate this work a knowledge of metaheuristics and linear algebra would be helpful.

T58 2007-023446 978-1-59904-561-0
Standardization research in information technology; new perspectives.

Title main entry. Ed. by Kai Jakobs.

Information Science Reference, ©2008 283 p. \$180.00

Jakobs (Aachen University) amasses cutting-edge research on the application of information technology standards in the marketplace, covering topics such as corporate standardization, linguistic qualities of international standards, the role of individuals in standardization, and the development, use, application, and influence of information technology in standardization techniques. The first section, on setting standards, covers international and corporate standardization, and the second section provides insight into some general characteristics of standards and the underlying standards-setting process. Section III, on diffusion and adoption of standards, looks at scope and timing of deployment, standards for business component markets, and a diffusion model for communication standards in supply networks. Section IV offers IS perspectives, and the final section, on cases and projects, looks at aspects relating to applications of standards in the market, with chapters on market response to ISO 9000 certification of software engineering processes, and Microsoft and Linux in China.

T58 2007-039616 978-1-59904-941-0

Intelligent information technologies; concepts, methodologies, tools and applications; 4v.

Title main entry. Ed. by Vijayan Sugumaran.

Information Science Reference, ©2008 2396 p. \$1,550.00

Sugumaran (Oakland U.) presents a four-volume reference that is intended to provide a foundational body of research for those working in the field of intelligent information technologies, which include agent-based technologies, sensor applications, emergent behavior, and neural networks. All told, the volumes collect 139 chapters, beginning with surveys of fundamental concepts and theories that include coverage of multimodal interaction techniques and applications, multi-agent systems and the generation of diversity, hierarchical classification with applications in bioinformatics, artificial neural networks, and genetic programming. A section on development and design methodologies follows that includes chapters on clustering analysis and algorithms, trust models for ubiquitous mobile systems, machine learning for agents and multi-agent systems, and fuzzy logic usage in emotion communication of human machine interaction, among other topics. Attention shifts to tools and technologies in chapters that examine such topics as user agent architecture and e-learning in health care and social care, genomic databanks for biomedical informatics, artificially intelligent learning games, self-organizing impact sensing networks in robust aerospace vehicles, and stochastic optimization algorithms. Utilization and application is the title of the fourth section, which includes such topics as decision support systems and their application in construction, virtual reality simulation in human applied kinetics and ergo physiology, application of swarm intelligence to collective robots, and application of fuzzy logic to fraud detection. Organization and social implications are examined in chapters covering interdisciplinarity in artificial cognition research, social coordination with architecture for ubiquitous agents, virtual communities and the alignment of web ontologies, and modeling malaria with multi-agent systems, followed by a section on managerial impacts describing business applications. The final two sections discuss critical issues—mind/body problems, memory and emotion in cognitive architecture, ethics of workplace surveillance, etc.—and emerging trends.

T58 2007-024948 978-1-59904-958-8

Intelligent information technologies and applications.

Title main entry. Ed. by Vijayan Sugumaran.

IGI Publishing, ©2008 327 p. \$99.95

Intelligent agents are software entities that perform a set of tasks with some degree of autonomy. Presented by Sugumaran (Oakland U.), the 14 chapters contained in this volume explore agent-based applications in the domains e-learning, online auctions, Web services, and semantic technologies. Examples of specific topics include securing infrastructure for service-based e-learning environments, assisting learners to dynamically adjust learning processes by software agents, combating information overload by means of information customization services, implementing seller agents in multiple online auctions, the importance of interface agent characteristics from end-user perspectives, multiagent systems and Web services in enterprise environments, a service discovery model for mobile agent-based distributed data mining, integration of management of quality of Web services in service oriented architecture, and using semantic web concepts to retrieve specific domain information for the Web.

T385 2007-040969 0-7897-3681-0

Microsoft Office PowerPoint 2007 complete makeover kit. (CD-ROM included)

Bajaj, Geetesh and Echo Swinford.

Que Publishing, ©2008 241 p. \$29.99 (pa)

In this book/CD-ROM kit, PowerPoint trainers and consultants Bajaj and Swinford give step-by-step instructions for creating great PowerPoint presentations. They walk readers through eight "makeovers," including corporate, school, personal, and trade show presentations, with screen shots and results for each step of the process illustrated in color. The CD-ROM contains all of the book's sample presentations, plus files needed for doing the makeovers, along with royalty-free pictures, music tracks, and templates. The only prerequisite for using the book is a basic user's understanding of Microsoft Windows and Office.

ENGINEERING (GENERAL, CIVIL)

TA168 2007-022017 978-0-8493-3053-7

Logistics engineering handbook.

Title main entry. Ed. by G. Don Taylor.

CRC / Taylor & Francis, ©2008 -- p. \$129.95

This collection of 30 articles, all with a unique engineering focus, provide a rigorous mathematical treatment while focusing on the

practical rather than the analytical. Covering both traditional and up-to-the-minute topics and techniques, the contributors open with an historical perspective, the economic impact of logistics, the logistics engineering toolkit, metrics and the idea of logistics as an integrating system's function. Articles on logistics activities include such topics as customer service, purchasing and sourcing, demand forecasting (using an analytic hierarchy process and genetic algorithm-based multiple regression analysis), facilities location and layout design, inventory control theory, material handling system, warehousing, distribution system design, and transportation systems. Other major topics include transportation management, enabling technologies and new trends. Includes extensive case studies, exercises and tutorials.

TA174 2007-017923 978-1-4200-5132-2

Engineering design reliability applications; for the aerospace, automotive and ship industries.

Title main entry. Ed. by Efstratios Nikolaidis et al.

CRC / Taylor & Francis, ©2008 -- p. \$129.95

Using real-life engineering applications of reliability design in the aerospace, automotive, ship, and defense industries, Nikolaidis (Mechanical, Industrial and Manufacturing Engineering Department, University of Toledo) explains how to apply probabilistic approaches and reliability methods to practical engineering problems. The applications involve advanced systems such as space shuttles, aerospace propulsion, nanocomposite structures, and bioengineering systems. The book presents two computer programs for reliability analysis, and demonstrates them on aircraft engines, structures used for testing explosives, and medical and automotive systems. The focus then shifts to aircraft and space systems. Analytical tools are provided for reliability analysis, design optimization, and sensitivity analysis of automotive systems. The book is for engineers, technical managers, and consultants in the aerospace, automotive, civil, and shipbuilding engineering industries who want to use reliability methods for product design.

TA417 2007-042802 978-0-470-04824-5

Peterson's stress concentration factors, 3d ed.

Pilkey, Walter D. and Deborah F. Pilkey.

John Wiley & Sons, ©2008 522 p. \$165.00

The sheer volume of stress concentration data, used in the design of mechanical or engineering structures and machinery, is now so large

that analysts and designers have difficulty integrating this information efficiently into design applications. This book establishes and maintains a system of data classification for all of the applications of stress and strain analysis, and helps expedite their synthesis into CAD applications. This third edition has been revised and updated, and presents stress concentration factors both graphically and with formulas. Structures and shapes of interest can be accessed via an illustrated table of contents that permits identification based on the geometry and loading of the location of a factor. The book will be useful for engineers and designers working in the automotive, aerospace, and nuclear industries, for civil and mechanical engineers, and for students and researchers in these fields. Walter Pilkey teaches mechanical and space engineering at the University of Virginia. Deborah Pilkey is an engineer in the private sector.

TA418 2005-927966 1-58883-067-5

Functional nanomaterials.

Title main entry. Ed. by Kurt E. Geckeler and Edward Rosenberg. (Nanotechnology book series; 10)

American Scientific Publishers, ©2006 488 p. \$399.00

Geckeler (Gwangju Institute of Science and Technology, South Korea) and Rosenberg (University of Montana) present work reviewing the international state of the art in materials and processes for tailoring nanomaterials toward desired functions in various applications. The book covers major classes of nanomaterials, such as carbon nanotubes, carbon and polymer nanofibers, and fullerenes, and highlights various physiochemical properties of different nanostructures, such as catalytic, dielectric, and luminescent properties. The range of applications discussed, including photonics, proteomics, biomolecular electronics, homeland security, and drug delivery, will be of interest to a broad spectrum of scientists and professionals working in fundamental and applied research dealing with nanomaterials, nanotechnology, and related scientific disciplines. B&w images and illustrations are included.

TA418 2005-927967 1-58883-068-3

Polymeric nanostructures and their applications; 2v.

Title main entry. Ed. by Hari Singh Nalwa. (Nanotechnology book series; 20)

American Scientific Publishers, ©2007 1000 p. \$695.00

Nalwa (the founder and editor-in-chief of the *Journal of Nanoscience and Nanotechnology*) presents a two-volume reference summarizing

the current knowledge of functional polymeric nanostructures for students, researchers, and practitioners working in the fields of polymer science and technology, materials science, chemistry, physics, surface science, engineering, and nanotechnology. The material is thematically separated, with the first volume primarily focused on types of nanostructured polymeric materials and including 11 chapters on structured polymer nanoparticles; nanostructured functional polymer assemblies; fabrication of multiscale nanostructures from polymeric membrane templates; synthesis and applications of polysilsesquioxanes; polymer nanostructures constructed via atomic force microscopy and their applications; construction of nanostructures for use as molecular devices (polymeric design, supramolecular approach, and layer-by-layer architecture); nanostructured polymer/surfactant films; nanostructured polypyrrole and composites; nanostructures and organization of compacted single chains of polyelectrolytes; polymer ordering in nanoconfined spaces; and biomimetic particles. The second volume contains 13 review chapters discussing applications in different fields and includes coverage of layered silicate based polymeric nanocomposites; industry-relevant preparation, characterization, and applications of polymer nanocomposites; active composite polymers containing carbon nanotubes; light-induced nanostructure formation using azobenzene polymers; patterning of conjugated polymers for organic electronics and optoelectronics; electrodeposited polymers for the development of biosensors; nanosized polymers in drug delivery; nanoscale spectroscopic characterization of conductive polymer electrocoated carbon fiber surface; and nanosurface-initiated living radical polymerization. Each chapter includes an extensive list of references. Each volume includes a separate subject index.

TA455 2007-037153 978-0-8155-1551-7

Selection of polymeric materials; how to select design properties from different standards.

Campo, E. Alfredo.

William Andrew Publishing, ©2008 253 p. \$230.00

This reference provides information about generic polymeric materials test procedures, and helps readers select the right resin and appropriate values for each plastic property. For the most common generic polymeric materials (88 thermoplastics, 22 thermoplastic elastomers, and 22 thermosets) covered in this handbook,

generic property tables are provided based on the category of test being reviewed. In addition, optical, coefficient of friction, wear, and other property tables required for special applications are included within these test standards. Chapters cover mechanical, thermal, electric, and physical properties, plus microbial, weather, and chemical resistance of polymeric materials. Various standards including ASTM, ISO, UL, and British Specifications are also compared, and discrepancies between different test standards are noted. B&W photos of testing machinery are included. The book will be useful to product designers, buyers, quality engineers, process engineers, laboratory testing technicians, material procurement personnel, and others responsible for the selection of a plastic resin material. Campo is a retired DuPont senior engineer.

TA455 978-1-60021-651-0

Handbook of polymer research; monomers, oligomers, polymers and composites.

Title main entry. Ed. by Richard A. Pethrick et al.

Nova Science Publishers, ©2007 459 p. \$145.00

The 31 articles in this collection present recent research on the synthesis of new silazane monomers and polymers, thermoreactive polysiloxanes, and methylsiloxane oligomers; and the stabilization of PVC products. Other topics include organic chemiluminescence, the interaction of surfactants with ion polymeric sorbents, quantum chemical calculation, a novel IR emission liquid cell, and using plants for recultivation of oil polluted soils. Several of the articles were written by the same, largely Russian authors.

TA462 978-3-527-31125-5

Corrosion handbook; corrosive agents and their interaction with materials, 2d rev.ed.; v.9: Potassium hydroxide, ammonium and ammonium hydroxide.

Title main entry. Ed. by Gerhard Kreysa and Michael Schütze.

Wiley-VCH, ©2007 554 p. \$510.00

Even after decades of research, corrosion still costs industrialized countries between two and four percent of their gross national product, much of it because the knowledge to prevent it gathers dust in obscure specialized publications unavailable and unknown to industrial engineers and operators. Thus this series on approximately 1,000 different attacking chemical media and mixtures of materials. Each chapter—two in this volume—describes the effect of the subject corrosive on metallic

materials, non-metallic inorganic materials, organic materials and plastics, and materials with special properties. They also contain information on protecting materials against it.

MECHANICAL ENGINEERING & MACHINERY

TJ163 2007-023066 978-1-4200-6113-0

Guide to energy management, 5th ed.

Capehart, Barney L. et al.

Fairmont Press, ©2008 542 p. \$150.00

Capehart (industrial and systems engineering, U. of Florida, Gainesville) et al. present a guide for use in energy management and professional development courses on improving lighting, combustion processes, steam generation/distribution, and industrial waste re- utilization. They cover distributed generation, energy auditing, rate structures, economic evaluation techniques, lighting efficiency improvement, HVAC optimization, combustion and use of industrial wastes, steam generation and distribution system performance, control systems and computers, maintenance, renewable energy, and industrial water management. The new international edition has numerical data and calculations in Système International (SI) units and addresses energy management issues and technologies from an international perspective. Two chapters on dealing with boilers, steam systems, and waste heat recovery have been revised; some less practical material has been omitted; and new topics on the efficiency of manufacturing facilities have been added. Distributed by Taylor & Francis.

TJ163 2007-459717 978-92-64-03016-9

Tracking industrial energy efficiency and CO₂ emissions; in support of the G8 plan of action.

Title main entry.

OECD, ©2007 321 p. \$130.00 (pa)

At their 2005 meeting, the eight richest countries in the world, the G8, asked the International Energy Agency, a creation of the Organization for Economic Co-operation and Development, the richest 30 countries in the world, to offer them advice on creating a clean, clever, and competitive energy future that they could show their critics. Because environmentalists were going on and on back then about Greenhouse Gas and the like, the focus was on reducing carbon dioxide emissions from unpopular industries in their countries: petroleum, chemicals, metals, and paper. Perhaps they think the price is low for a paper-bound book already financed by the richest governments and industries in the

world; perhaps they only intend to keep the information in proper hands. There is no index.

ELECTRICAL ENGINEERING, ELECTRONICS

TK5105 2007-022232 978-1-59904-507-8

Strategies and technologies for developing online computer labs for technology-based courses.

Chao, Lee.

IGI Publishing, ©2008 351 p. \$99.95

Chao (math, computer science, University of Houston-Victoria) discusses design strategies, implementation problems, and the effectiveness of online computer labs for technology-based courses. He provides information about different types of online computer labs and technologies used in computer labs, and overviews trends in Web-based teaching and technologies that can potentially improve Web-based teaching and learning. He offers guidance on selecting technologies for various projects, and case studies illustrating Web-based teaching. The readership for the book includes all those involved in the theory, research, and practice of online education, including education technology specialists, practicing teachers, and educational administrators.

TK5105 2007-023433 978-1-59904-639-6

Securing Web services; practical usage of standards and specifications.

Title main entry. Ed. by Panos Periorellis.

Information Science Reference, ©2008 404 p. \$180.00

Fourteen contributions share experiences implementing web service security mechanisms on different platforms, combining architectural styles with web services, and controlling access through authorization, WS-Policy, X-GRBAC, SAML, and SACML. Topics include a brokered architecture to support secure web services composition, dynamic delegation of access control rights, a test bed for evaluating web service technologies against GRID scenarios, and bootstrapping quality of service attributes. The editor is a computer scientist at the University of Newcastle upon Tyne in the UK.

TK6018 2007-030904 978-0-393-06206-9

The telephone gambit; chasing Alexander Graham Bell's secret.

Shulman, Seth.

W.W. Norton, ©2008 256 p. \$24.95

From researching Bell's notebook, patent applications for the telephone, and scholars' doubts, the Massachusetts science writer debunks

long-held views of the famous inventor. Shulman convincingly makes a case for its invention by Elisha Gray, who initially underestimated its commercial potential. The book is a Bell biography-cum-tale of scientific/corporate intrigue with period photos, illustrations pertaining to patents, and extensive references.

TK6570 2007-036724 978-0-7897-3726-7

My iPhone.

Miser, Brad.

Que Publishing, ©2008 342 p. \$19.99 (pa)

The iPhone can be used as a cell phone, as an iPod to listen to music and podcasts, to watch videos and photos, surf the Web, send text messages, and real-world navigation with the Maps widget. The author of the *Absolute Beginner's Guide to iPod and iTunes* and other Mac-oriented computer writings offers step-by-step instructions on customizing the iPhone for these uses. The book includes a trial subscription to an online version.

CHEMICAL TECHNOLOGY

TP156 2007-019893 978-0-470-17093-9

Multiple emulsions; technology and applications.

Title main entry. Ed. by Abraham Aserin. (Wiley series on surface and interfacial chemistry)

Wiley-Interscience, ©2008 326 p. \$125.00

This volume, consisting of 12 chapters by an international group of contributors working in applied chemistry, pharmacy, microbiology and immunology, chemical engineering, and natural science, details how to enhance the stability of multiple emulsions, with explanation of their definition and properties, formation and stability, and potential applications, concentrating on medical and pharmaceutical ones. The book stresses the recent findings that model the transport phenomena through the different interfaces present in multiple emulsions. Articles were written in honor of scientist Nissim Garti's 60th birthday. The book is meant for physical and food chemists, chemical engineers, and surface, colloid, soft materials, controlled release, and pharmaceutical scientists in drug delivery applications, as well as graduate students. Aserin is a researcher at the Casali Institute of Applied Chemistry at the Hebrew U. of Jerusalem.

TP248 978-3-527-31689-2

Enzymes in industry; production and applications, 3d ed.

Title main entry. Ed. by Wolfgang Aehle.

Wiley-VCH, ©2007 489 p. \$215.00

Aehle (research and development, Genencor, the Netherlands) presents an overview of applications

of enzymes in an industrial environment, covering the discovery, modification, and production of technical enzymes. He first presents material on the history of enzyme science, the catalytic activity of enzymes, general production methods, and discovery and development. He then presents a large number of descriptions of enzyme applications in food processing, laundry and dish detergents, textiles and paper production, the production of bulk products, medical usage, and genetic engineering, among others. A final chapter addresses enzyme safety and regulatory considerations.

TP421 978-1-905224-42-5

Sweeteners, 3d ed.

Title main entry. Ed. by Rachel Wilson. (Ingredients handbook)

Blackwell Publishing, ©2007 304 p. \$169.99
From acesulfame K to xylitol, the food industry has been driven to find low-calorie substitutes for sugar in products from chewing gum to pharmaceuticals. In this update of the 2002 and 1996 editions, Wilson (senior technical advisor, Leatherhead Food International, Surrey, UK) compiles descriptions by international food scientists of a dozen intense and ten bulk sweeteners. Descriptions of these food additives include a general overview; their chemical, physical, and physiological properties; applications; analytical methods; regulatory status (in some cases); a recipe/ formulation; and further reading. New material has been added on neotome, isomaltose, and trehalose; and the chapter on permitted sweeteners in the UK, Europe, and US has been updated. The handbook includes a list of suppliers.

TP593 2007-929388 978-0-9786293-0-4

Sustainable ethanol; biofuels, biorefineries, cellulosic biomass, flex-fuel vehicles, and sustainable farming for energy independence.

Goettemoeller, Jeffrey and Adrian Goettemoeller.

Prairie Oak Publishing, ©2007 195 p. \$17.00 (pa)

The brothers—plant scientist Jeffrey and geologist Adrian—have backgrounds in environmental remediation and sustainable agriculture. They promote ethanol as a substitute for petroleum, arguing that with enough good old American know-how, it can eventually be grown sustainably, will not jeopardize the food supply of anyone they know, and someday could even help reduce soil erosion when cellulosic ethanol is made from perennial crops.

TP935 2007-019614 978-1-57444-703-3

Paint technology handbook.

Talbert, Rodger.

CRC / Taylor & Francis, ©2008 224 p. \$139.95

Focusing on industrial coatings applied to manufactured durable goods, this text describes every step in the automated liquid paint application process, particularly spray guns used in containment booths. The opening chapters discuss chemical cleaners for surface preparation, conversion coatings, washing systems, paint components, paint classification, fixation, curing, and color matching. Black and white drawings illustrate spray gun components, delivery systems, electrostatic systems, rotary atomizers, proper spray stroke, booth design, and surface defects.

TP1150 2007-018765 978-1-56990-417-6

Injection mold design engineering.

Kazmer, David.

Hanser Gardner Pub., ©2007 424 p. \$99.95
Kazmer (plastics engineering, U. of Massachusetts Lowell) synthesizes the engineering information involved in plastic injection molding processes, including plastication, injection, packing, cooling, and mold resetting. Chapters cover plastic part design, mold cost estimation, mold layout design, cavity filling analysis and design, feed system design, gating design, venting, cooling system design, shrinkage and warpage, ejection system design, structural system design, and mold technologies.

TP1180 2007-021316 978-0-471-79057-0

Polyolefin composites.

Nwabunma, Domasius and Thein Kyu.

Wiley-Interscience, ©2008 603 p. \$150.00

This work consolidates information so that readers can compare and select materials for polyolefin composites. After an introductory overview on emerging trends in polyolefin composite research and development, the book examines polyolefin microcomposites, polyolefin nanocomposites, and advanced polyolefin nano- and molecular composites. Aspects covered include various processing methods, morphological characterization, crystallization, structure and properties, and performance evaluation. Modeling, simulation, and applications are also covered. The book will be useful for polymer engineers and scientists, graduate students in polymer science and engineering, and professionals in construction, transportation, and other industries using specialized structural materials. Nwabunma is a research specialist with expertise in polymer processing. Kyu teaches

polymer engineering at the University of Akron.

MANUFACTURES

TS155 2007-024485 978-1-59904-582-5
Handbook of computational intelligence in manufacturing and production management.

Title main entry. Ed. by Dipak Laha and Purnendu Mandal.
Information Science Reference, ©2008 491 p.
 \$210.00

This handbook focuses on new developments in computational intelligence as it relates to the areas of forecasting, scheduling, production planning, and inventory control. The volume contains 23 chapters written by more than 50 contributors. During the past two decades, computer and information technologies have caused significant changes in the ways businesses manage their operations in meeting the desired quality of products and services, customer demands, and other tasks. This collection offers up-to-date information for both researchers and professionals in operations and production management, Web engineering, artificial intelligence, and information resources management. Sections include computational intelligence methodologies, supply chain and decision support systems, and applications in manufacturing and production management.

TS155 978-1-876843-42-7

Toyota's assembly line; a view from the factory floor.

Ihara, Ryoji. Trans. by Hugh Clarke. (Japanese Society series)

Trans Pacific Press, ©2007 250 p. \$34.95 (pa)

Based on his experience on the assembly line at a Toyota factory in Japan in 2001—during the “reformation” period after the 1990s bubble burst, sociologist Ihara (Gifu U., Japan) tempers glowing assessments of the leading carmaker with an insider view of worker training and quality control circles. Appendices treat research trends and debates over Japanese auto factories, and subsequent developments in the Toyota workplace. Translator Clarke (U. of Sydney) is a visiting professor at Waseda U., Tokyo. Distributed in the US by ISBS.

TS157 2007-010013 978-1-4200-4420-1
Production planning and industrial scheduling; examples, case studies, and applications, 2d ed.

Sule, Dileep R.

CRC / Taylor & Francis, ©2008 534 p.
 \$99.95

This second-edition textbook, an expanded edition of *Industrial Scheduling* (1997), is intended for engineering, industrial and manufacturing students, those studying business and operations management, and professionals who need a handy reference (each procedure is illustrated with a solved example). Sule (industrial engineering, Louisiana Tech U.) shows how to integrate logistical factors, production planning, and production scheduling data and discusses production factors and strategies, the location of plants, differences in material flow based on machine configuration, scheduling issues associated with various production patterns, and planning for quantities. He advocates a simple heuristic approach to production planning and industrial scheduling rather than more complex mathematical techniques. A companion website offers additional material.

TS171 2007-017878 978-0-470-05538-0

Industrial design; materials and manufacturing guide, 2d ed.

Lesko, Jim.

John Wiley & Sons, ©2008 250 p. \$65.00

Lesko (art and industrial design, U. of Bridgeport) updates the 1988 edition of this reference covering materials and manufacturing processes intended to supplement texts in industrial design engineering. The following materials and processes are among the topics addressed, along with the related major design principles: metals, metal cutting and joining, appearance finishing, plastics, rubbers and elastomers, natural engineering materials, and composites. The final chapter covers rapid prototyping. Chapters are well-illustrated. Oversize: 10.25x9”.

TS176 2007-035297 978-1-4200-4686-1

Effective transition from design to production.

Ciambrone, David F. (Series on resource management)

Auerbach Publications, ©2008 246 p. \$79.95
 Anomalies in the local gravity, space aliens, and of course nowadays Arab terrorists are often suspected when a really good idea crashes and burns on the way from the laboratory to the shop floor. Ciambrone says the problem is not there, in the transition. He spent four decades doing both design and manufacturing in commerce

and defense, and contends that the flaw lies in original designs—or even the first conceptions—that do not include a manufacturing plan. Distributed in the US by Taylor and Francis.

TS192 2006-053157 978-0-8311-3300-9

Preventive maintenance.

Wireman, Terry. (Maintenance strategy series; v.1)

Industrial Press, ©2008 216 p. \$44.95

This first volume in a projected 10-volume series details the importance of preventive maintenance to an overall maintenance strategy. Emphasis is on how the components of any maintenance strategy are interlinked with dependencies, and on the performance measures necessary to properly manage the preventive maintenance program. A process flow diagram details the steps of developing the preventive maintenance program, and appendices contain examples of preventive maintenance inspections. A glossary is also included. The book takes care not to overemphasize the value of preventive maintenance to the exclusion of other components of a maintenance strategy. The author, a maintenance management consultant, was an editor of *Engineer's Digest* for 15 years.

TS192 2006-053263 978-0-8311-3323-8

100 years in maintenance and reliability; practical lessons from three lifetimes at process plants.

Narayan, V. et al.

Industrial Press, ©2008 363 p. \$49.95

The 100 years in the title refers to the combined years experience of the authors working as engineers in the hydrocarbon process industry, mostly overseas. The 42 chapters share lessons learned about leadership, benchmarking, staffing levels, technician training, critical path planning, shutdown management, infrastructure maintenance, trip testing, computing reliability data, turnaround performance improvement, motor maintenance, and cooling water pump failures.

FOOD SCIENCE

TX553 2007-034303 978-0-470-04259-5

Wheat antioxidants.

Title main entry. Ed. by Liangli Yu.

Wiley-Interscience, ©2008 276 p. \$90.00

While it may be widely recognized that wheat contains antioxidants, researching the antioxidant effects of wheat in foods on human health is a complicated endeavor due to the chemical processes involved in food processing and preparation. Lu (nutrition and food science, U. of Maryland) presents recent research on

this topic, compiling 16 chapters that discuss antioxidant properties of wheat grain and its fractions; effects of genotype, environment, and genotype-environment interaction on antioxidant properties of wheat; carotenoid, tocopherol, lignan, and flavonoid compositions of wheat grain and its fractions; antioxidant properties of wheat phenolic acids; effects of postharvest treatments, food formulation, and processing conditions on wheat antioxidant properties; antioxidant properties of wheat-based breakfast foods; effects of extraction method and conditions on wheat antioxidant activity estimation; methods for antioxidant capacity estimation of wheat and wheat-based food products; application of electron spin resonance spectroscopy in wheat antioxidant determination; analysis of tocopherols and carotenoids in wheat materials using liquid chromatography-mass spectrometry technology; quantification of phenolic acids in wheat and wheat-based products; effects of wheat on the normal intestine; wheat antioxidants and cholesterol metabolism; wheat antioxidant bioavailability; and wheat lignans as promising cancer preventive agents.

MILITARY ENGINEERING

UG447 2007-005392 978-0-8493-1434-6

Handbook of chemical and biological warfare agents, 2d ed.

Ellison, D. Hank.

CRC / Taylor & Francis, ©2008 762 p. 129.95

This handbook is intended to aid first responders dealing with industrial waste materials and military chemical and biological agents and toxin agents, as well as nontraditional agents and industrial materials which could be used as agents. This second edition adds new classes of agents and expanded information on existing classes, with more information on health affects and on the chemical, physical, and biological properties of these materials. As in the first edition, all materials listed have been used on the battlefield, stockpiled as weapons, received significant interest by research programs, used by terrorists, or have been assessed by law enforcement and response organizations as agents of significant concern. Information is given on toxicology, characteristics, protection, medical management, and disease symptoms, as well as CDC case definitions, and CAS and other reference numbers. Chapters are in sections on nerve agents, vesicant/urticant agents, toxic agents, incapacitation and riot control agents.

UG630 2007-015487 978-1-4200-6226-7

Modern missile guidance.

Yanushevsky, Rafael.

CRC / Taylor & Francis, ©2008 226 p. \$159.95

Ukrainian engineer Yanushevsky immigrated to the US in 1987. When he began working in the aerospace industry there in 1999, he was surprised at the difference between the high level of sophisticated control systems used in that industry and the rather simple guidance laws used in modern missiles, which he daintily calls interceptors. He explains how to apply aerospace design approaches to missile guidance in the time domain and frequency domain.❖

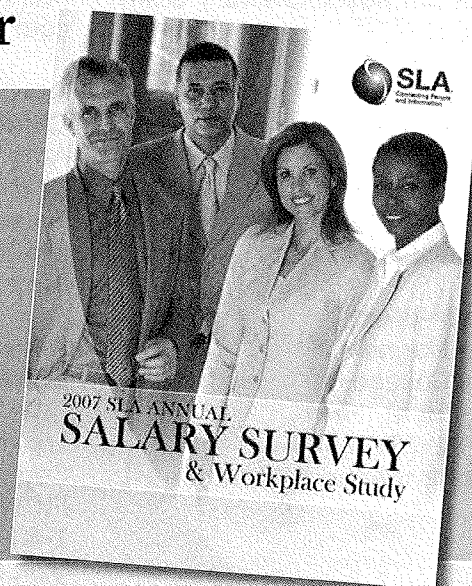
CALCULATE YOUR REAL VALUE

with the **SLA Salary Calculator**

LOOK UP SALARIES BY:

- **JOB TITLE**
- **PRIMARY RESPONSIBILITY**
- **BUDGET SIZE**
- **EMPLOYEES SUPERVISED**
- **LIBRARY EXPERIENCE**
- **LOCATION**

Available when you purchase the
2007 SLA Salary Survey & Workplace Study



www.sla.org/SalarySurvey2007