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Book Reviews

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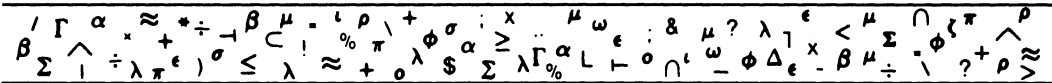


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Book Reviews

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The range of books reviewed is wide, covering theory and applications in operations research, statistics, econometrics, mathematics, computers, and information systems (no software is reviewed). In addition, we include books in other fields that emphasize technical applications. Publishers who wish to have their books and proceedings reviewed should send them to Professor Benjamin Lev. We list the books and proceedings received; not all books received can be reviewed because space and time are limited. Those who would like to review books are urged to send me their names, addresses, and specific areas of expertise. We commission all reviews and do not accept unsolicited book reviews. Readers are encouraged to suggest books that might be reviewed or to ask publishers to send me copies of such books.

HORST, R.; PARDALOS, P. M.; AND THOAI, N. T. 1995, *Introduction to Global Optimization*, Kluwer Academic Publishers, Dordrecht, The Netherlands, 318 pp., \$174.00.

The near field of our perception is linear, but life, space, and emotions are generally nonlinear, and global optimization captures the complexity, diversity, and structure of such problems throughout design, economics, engineering, finance, science, and environmental modeling, to name but a few areas. Global optimization is a beautiful field of research with a wide

and diverse application base, and most readers are probably acquainted with the handbooks by Floudas and Pardalos [1992] and Horst and Pardalos [1994] and the text by Horst and Tuy [1993]. The sheer scope and size (mainly the size) of these books simply turned my engines off shortly after ignition. Finally we have a (relatively) small textbook on global optimization that encompasses the scope of the field in an introductory yet rigorous and honest way. I found myself reading the text with pleasure, skipping around and ignoring

sections or details that I wasn't interested in while enveloping myself in material that caught my attention. There are a number of things I like about this book: it is comprehensive, cohesive, nicely written, intelligent, and serious. The authors provide a nice selection of homework exercises (with solutions) at an appropriate level and a good mixture of theory, application, and numerical problems throughout the text. The text would be perfect for a course on global optimization. The authors are well-known leaders in the field, and the depth of coverage is impressive. The authors choose their words well, and the reading is pleasant.

We are led through an introductory chapter on background results, and then the fun begins: quadratic programming, general concave minimization, DC programming, Lipschitz optimization, and global optimization on networks. Each chapter is devoted to a single topic, and this organization allows one to choose material at will, and also, as every good author knows, provides the reader with a well-defined beginning, climax, and conclusion.

The main disadvantage to this text is its price. When I was younger, I bought many costly books, such as Luenberger's [1969] "red" book, Spivak's [1979] differential geometry five-volume series with the neat sequential art cover, Alekseev's optimal control book [Alekseev, Tikhomirov, and Fomin 1987] and Aumann's [Aumann and Hart 1992, 1994, 1998] game theory book, which all packed punches on the order of \$100. I must hasten to add, however, that in my old age, I could not justify buying this beautiful book because of its price

tag—despite the outstanding contents. Professional society discounts make only a slight bruise in the price. Three suggestions come to mind: (1) Adopt the book for class to get an instructor's copy but later show empathy with students who cannot afford their lunch vouchers, (2) wait for the soft-cover edition, (3) Xerox.

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EARLEY, P. CHRISTOPHER AND EREZ, MIRIAM 1997, *The Transplanted Executive: Why You Need to Understand How Workers in Other Countries See the World Differently*, Oxford University Press, New York, 198 pp., \$25.00.

The topic Earley and Erez deal with in this book is clear: the way a worker in Sin-

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gapore thinks is quite different from the way a Finnish worker thinks given the same impulses. Therefore, in the present world situation, where the economy is becoming more and more globalized, it is of interest to know how an executive transplanted to a country different from his or her own and with a business culture different from the one he or she is accustomed to should establish relations with the employees.

The book is a success for a number of reasons: first, the clarity with which it is written. The authors are concise in stating their theories, keeping in mind the fact that their readers, executives, do not wish to waste time reading hyper-inflated essays. The authors go straight to the point.

Second, the book is a success because of its structure. It is divided into two parts. In the first part (three chapters), the authors present their basic arguments, which help the reader to understand the rest of the book and make reading it easier. Essentially, they think that the way workers of any company behave is determined by two variables: the cultural values of their country (with two components: whether the group or the individual spirit dominates; and what the authors call power differentials, that is the capacity of people to follow orders without questioning them); the second variable is that of self-knowledge, such factors as the desire to do a job well, to overcome challenges, and to achieve stability. In the first three chapters, Earley and Erez classify the 50 most active countries in the world from a business point of view according to cultural values. In the next five chapters, they separately develop important aspects of man-

agement, such as internal communication and decision making, motivation of personnel, the formation of teams, leadership and, last of all, quality improvement. They approach each of these topics by considering the characteristics required by a worker who comes from a certain culture and has particular personal motivations. In the last chapter, they summarize the previous points and give practical guidelines for acting on them. The appendix contains a short questionnaire to be used by the readers to determine which of these values predominate in these.

By knowing their own tendencies, they will be better able to control the behavior of future employees. The book contains a multitude of practical cases and examples, which makes it easy to read and entertaining.

Because the book is somewhat subjective, one could criticize some aspects. For instance, the classification of countries according to their cultural values may lack scientific rigor (the authors make no mention of any work that establishes this classification). Other judgments are arguable; should an Italian worker from the north be classified in the same way as one from the south? What is the justification for classifying Portugal as a group-focus country, while Spain—with which it is so closely related geographically and culturally—is classified as a self-focus country?

The authors stress that the book is intended for executives who face new challenges in countries different from their own. I would recommend it also as supplementary material for an international business course. Students would be thankful for its simplicity, its conciseness, and

the case studies of real businesses that it contains.

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PRITSKER, A. ALAN B.; O'REILLY, JEAN J.; AND LA VAL, DAVID K. 1997, *Simulation with Visual SLAM and AweSim*, John Wiley and Sons, New York, 811 pp., \$89.95.

The objective of this book is to address simulation methodology, which includes modeling, computer science, probability, and statistics, based on the products of Pritsker Corporation, Visual SLAM and AweSim.

The book consists of 17 chapters. The first chapter is an introduction to modeling and simulation. In the second, the authors review the alternative perspectives for simulation modeling (discrete, continuous, and combined discrete-continuous) and introduce the unified modeling framework of Visual SLAM. In Chapter 3, the authors describe the steps in performing a simulation project.

Chapters 4 through 13 are devoted to a detailed description of Visual SLAM. Discrete models can be coded using both event and process orientations. In the process orientation, one uses a network structure to model such elements as queues and servers. In the event orientation, one codes the changes associated with each event type as Visual Basic or C procedures. One codes continuous models by stating the differential or difference equations as Visual SLAM memory structure. The most important feature of Visual

SLAM is that the different perspectives of modeling can be combined within the same simulation model.

In Chapter 14, the authors present AweSim as a tool to support the many tasks on a simulation project, such as data management, model management, scenario generation, verification, validation, output analysis, documentation, and the presentation of results. An important aspect of AweSim is the possibility of interconnection to databases, spreadsheets and processing programs, such as Microsoft Office. In Chapter 15, the authors present an overview of the types of applications of simulation. They describe eleven situations of simulation in various application areas. In Chapters 16 and 17, they cover different statistical aspects of simulation, such as probability distributions, random-number generators, variance-reduction techniques, and the design of experiments.

The book is clear and well organized. Each chapter begins with an introduction that clearly describes what will be covered. At the end of each chapter, the authors include a summary, exercises, and references. The book contains 26 examples and 27 illustrations, which are useful to show the simulation concepts and capabilities of Visual SLAM. The book would have been easier to use if the authors had included a diskette with the examples and a student version of Visual SLAM and AweSim. The book should be interesting to students in a simulation course focused on Visual SLAM and also to practitioners.

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SAUTER, VICKI L. 1997, *Decision Support Systems: An Applied Managerial Approach*, John Wiley and Sons, New York, 408 pp., \$75.95.

Occasionally, one discovers a book written by an author who has both technical mastery of the subject and the ability to write in a smooth, intuitively clear style. Such books tend to be useful far beyond the classroom environment, serving as cherished references and friends for many years. Vicki Sauter of the University of Missouri in Saint Louis has written such a book, to her great credit.

Although clearly intended as an introductory textbook on decision support systems (DSS) in a business context, the clarity and content of this book give it a far wider scope. While it is clearly of value to developers of computer hardware and software, it also has great value to students of command, control, and communication; practical and applied management; organization; and allied disciplines.

This book is an overview of the different areas of DSS, it is broken into logical divisions and is populated with contemporary business and government applications. One clarifying virtue of the book is that the author has chosen examples relevant to the divisions of the book, considering different aspects of the example DSS in the appropriate sections of the book. Thus, after reading the book, students should have deep understanding of the facets of DSS so that, given access to appropriate databases and knowledge of computer programming, they could duplicate the examples or develop their own DSSs by extension. Theory and practice are superbly integrated, so that implementation can de-

velop naturally.

The author achieves this educational consistency without paying excessive attention to the diverse models, simulations, and methodologies that constitute the functional underpinnings of DSS. Including them, impossible in the dynamic environment of today, would have reduced this book to an unwieldy handbook and compromised its message. Those seeking such a compendium will not find it here. This is a capstone integration of DSS that provides the reader with a framework in which to envision, plan, and implement a DSS. Finding and implementing the functional machinery can then follow.

The only concern I have is about end-user participation. As an observer of DSS development, I believe the treatment of the end users' role in DSS development has been somewhat slighted. In my experience, too many DSSs have foundered because of the too-late or too-little involvement of data providers and decision makers. If data providers' work is too unpleasant or decision makers are uncomfortable, the DSS will not serve its purpose and will be soon discounted or discarded. Given the strengths of the work and its introductory intent, this slight fault does not compromise its value.

The title indicates that this book is intended to be a managerial approach, and it is clearly written from the standpoint of managing the development, implementation, and maintenance of a DSS. The book is clearly written for this technical audience rather than for the more general management audience as a whole. A book that speaks with such clarity and impact for both communities would be difficult to

write. Nonetheless, there is a clear need for a similar book addressed to the more general, non-technical management community. Given the obvious strengths of this book and its author, I hope that we may see such a work from Vicki Sauter's pen in the future.

I strongly recommend this book to teachers of introductory DSS and command-and-control courses as well as to practitioners in these and allied areas.

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