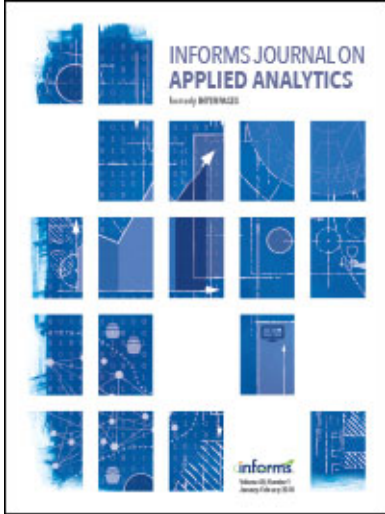




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Book Reviews

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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. In addition, we include books in other fields that emphasize technical applications. 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 the editor their names, addresses, and specific areas of expertise. The editor commissions all reviews and does not accept unsolicited book reviews. Readers are encouraged to suggest books that might be reviewed or to ask publishers to send copies of such books to the editor.

GIORDANO, FRANK R. and WEIR, MAURICE D. 1985, *A First Course in Mathematical Modeling*, Brooks-Cole Publishing Division of Wadsworth, Belmont, California, 382 pp., \$35.25.

This book covers basic mathematical modeling at an undergraduate or first-year graduate level. The prerequisites are basic algebra, single-variable differential and integral calculus, and partial derivatives. I would expect a book about modeling to include mostly case-type problems focused on problem definition, data specification, and implementation issues (topics typically not covered in depth in texts

devoted to model formulation and solution techniques). This text does present many examples of this sort, but the problems tend to be either short questions about the examples or simple exercises no more difficult than the "word problems" found in most calculus or management science texts. The authors do, however, suggest a few projects and reference a number of projects which may be obtained from UMAP (Undergraduate Mathematics and Its Applications Project). But while many problems in the book are more straightforward than I would prefer, the text does cover a wide variety of

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model types. Problems and examples come from many academic disciplines including mathematics, operations research, engineering, and life sciences.

Although solution techniques are not presented in most cases, the models are organized into chapters based on the solution techniques they would require. Models covered include those whose solution requires: graphing, geometry, curve fitting, optimization (calculus and linear and integer programming), simulation, and differential equations. There are also models using interpolation, smoothing, dimensional analysis, and similitude. Obviously with so many different model types covered, none of them are covered in much depth.

With the exception of the chapter on optimization models, the text contains very few business-type examples. For this reason, and because of the level of mathematical sophistication required, I don't feel this text is suitable for business students. It may work well for junior-level mathematics or engineering students, though, providing some practice in formulating problems which require a diversity of solution techniques.

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Note

UMAP materials are available from COMAP,
Inc., 271 Lincoln Street, Lexington, Massa-
chusetts 02173.

MCLEOD, RAYMOND, Jr. 1985, *Decision
Support Software for the IBM Personal Com-
puter*, Science Research Associates, Chi-

cago, Illinois, 60680, 224 pp., \$16.00.

Every so often a text comes along with an intriguing title that turns out to be completely unrelated to its contents. Given the competitiveness of the market place this could be forgiven if the content were substantive and appropriate. Unfortunately, this is not the case here. McLeod has written an elementary manual on simple microcomputer software (BASIC, dBase II, VisiCalc, WordStar) much of which has already been replaced by more elegant packages.

McLeod implies that by mastering these simple tools, the reader will understand decision support systems. McLeod defines a DSS as an MIS on a smaller scale. He talks about it as a "conceptual information system . . . intended to support individual managers rather than the firm as a whole." He includes some incredible chapters. One entitled "The role of programming in DSS" does not discuss the subject; it only explains that there are a lot of different languages around. In the chapter entitled "The role of data base management systems in the DSS," he tells us that "each application program, query request, and mathematical model represents a DSS." In his chapter on "The role of word processing in DSS," he argues that since managers read documents, word processing supports decisions. However, in his concluding chapter he leaves word processing out of his list of DSS software. He mentions only one fourth-generation language for the PC and gets that one wrong. Specifically, he asserts that IFPS/Personal can be used for Monte Carlo simulation when, in fact, simulation was the major capability

removed when IFPS was converted from mainframe to micro.

In summary, McLeod has given us a bad book. By trying to clothe a manual for freshmen and novices as a sophisticated book on DSS, he has done the profession a disservice. The tragedy is that the readers of this book, who will be future consumers of DSS, will assume that the book defines the field.

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