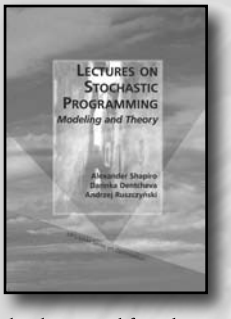
New Titles in Applied Math. *from* SIAM®

www.siam.org/catalog



Lectures on Stochastic Programming: *Modeling and Theory*

Alexander Shapiro, Darinka Dentcheva, and Andrzej Ruszczynski

This book focuses on optimization problems involving uncertain parameters and covers the theoretical foundations and recent advances in areas where stochastic models are available. Readers will find coverage of the basic concepts of modeling these problems, including recourse actions and the nonanticipativity principle. The book also includes the theory of two-stage and multistage stochastic programming problems and the current state of the theory on chance (probabilistic) constraints.

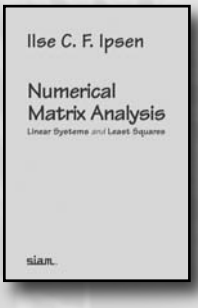
2009 · xvi + 436 pages · Softcover · ISBN 978-0-898716-87-0
List Price $119.00 · SIAM Member Price $83.30 · **MP09**

Fundamentals of Radar Imaging

Margaret Cheney and Brett Borden

The goal of this book is to provide mathematicians with the background they need to work in the radar imaging field, building on the foundation of the underlying partial differential equations. The focus is on showing the connection between the physics and the mathematics and on supplying an intuitive mathematical understanding of basic concepts. The book includes a description of how a radar system works, together with the relevant mathematics; theory that guides the choice of radar waveforms; derivation of the fundamentals of scattering theory; and derivation and discussion of the image formation process.

2009 · xxiv + 140 pages · Softcover · ISBN 978-0-898716-77-1
List Price $59.00 · SIAM-CBMS Members $41.30 · **CB79**

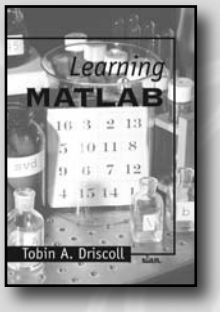


Numerical Matrix Analysis: *Linear Systems and Least Squares*

Ilse C. F. Ipsen

This self-contained textbook presents matrix analysis in the context of numerical computation with numerical conditioning of problems and numerical stability of algorithms at the forefront. Using a unique combination of numerical insight and mathematical rigor, it advances readers' understanding of two phenomena: sensitivity of linear systems and least squares problems, and numerical stability of algorithms. The material is presented at a basic level, emphasizing ideas and intuition, and each chapter offers both simple and challenging exercises.

2009 · xiv + 128 pages · Softcover · ISBN 978-0-898716-76-4
List Price $59.00 · SIAM Member Price $41.30 · **OT113**



Learning MATLAB

Tobin A. Driscoll

This engaging book is a concise introduction to the essentials of the MATLAB® programming language and is ideal for readers seeking a focused and brief approach to the software. *Learning MATLAB* contains numerous examples and exercises involving the software's most useful and sophisticated features and an overview of the most common scientific computing tasks for which it can be used. Rather than including exhaustive technical material, the author teaches through readily understood examples and numerous exercises that range from straightforward to very challenging.

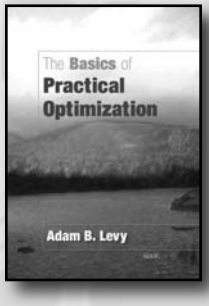
2009 · xiv + 97 pages · Softcover · ISBN 978-0-898716-83-2
List Price $28.00 · SIAM Member Price $19.60 · **OT115**

Parallel MATLAB for Multicore and Multinode Computers

Jeremy Kepner

This is the first book on parallel MATLAB® and the first parallel computing book focused on the design, code, debug, and test techniques required to quickly produce well-performing parallel programs. It presents a hands-on approach with numerous example programs; wherever possible, the examples are drawn from widely known and well-documented parallel benchmark codes that are representative of many real applications across the field of technical computing.

2009 · xxvi + 253 pages · Hardcover · ISBN 978-0-898716-73-3
List Price $65.00 · SIAM Member Price $45.50 · **SE21**



The Basics of Practical Optimization

Adam Levy

This textbook provides undergraduate students with an introduction to optimization and its uses for relevant and realistic problems. The only prerequisite for readers is a basic understanding of multivariable calculus because additional material is provided in a series of Asides both throughout the text at relevant points and in a handy appendix. The book presents step-by-step solutions for five prototypical examples that fit the general optimization model, along with instruction on using numerical methods to solve models and making informed use of the results.

2009 · xviii + 149 pages · Softcover · ISBN 978-0-898716-79-5
List Price $67.00 · SIAM Member Price $46.90 · **OT114**

TO ORDER, SHOP ONLINE AT www.siam.org/catalog.

All prices are in US dollars.

Use your credit card (AMEX, MasterCard, and VISA) by phone: +1-215-382-9800 worldwide, fax: +1-215-386-7999, or e-mail: siambooks@siam.org.
Or send check or money order in US dollars to: SIAM, Dept. BKIT09, 3600 Market Street, 6th Floor, Philadelphia, PA 19104-2688 USA.
Members and customers outside North America can also order SIAM books through SIAM's distributor, Cambridge University Press, at *www.cambridge.org/siam*.

12/09