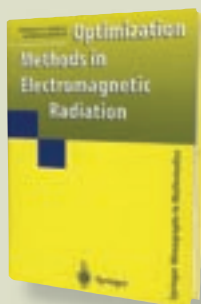


High-Performance Backbone Network Technology

Naoaki Yamanaka, ed.
The Institute of Electronics, Information and Communication
Engineers (IEICE), 2004; \$195.00 (hardcover).

This book is a selection of the best papers published in the IEICE Transactions on Communications, 1997 to 2002. Each article includes its own figures and list of references. The book provides an author index and topic index for the entire collection. Although IEICE is a Japanese organization, more than half the papers in this book are from international authors. The book focuses on ATM in the backbone, and covers systems and integration, traffic and performance issues for both electronic and photonic architectures. The book is generally useful, although I think that a book on backbone technologies should include a lot more on Gigabit Ethernet.

[Review by Bogdan Hoanca, assistant professor at the University of Alaska, Anchorage.]



Optimization Methods in Electromagnetic Radiation

Thomas S. Angell and Andreas Kirsch
Springer-Verlag New York Inc., 2004;
\$99.00 (hardcover)

This mathematical monograph is devoted to optimization problems in antenna designs, particularly electromagnetic radiators and receivers. The authors have carefully developed a framework of optimization theory that is applicable to solutions involving Helmholtz and Maxwell's equations. The authors address how to treat conflicting, but realistic objectives typical in engineering design problems through a general multi-criteria optimization problem. The theoretical framework is supported by simple but selective examples from the field of antenna designs. An appendix also supplies some of the necessary mathematical background. Applied mathematicians and engineers will both benefit from this monograph, which I would like to recommend.

[Review by Axel M. Koenig, CEO, 21st Century Data Analysis, a division of Koenig & Associates Inc., Portland, Ore.]



Handbook of Moiré Measurement

C.A. Walker, ed.
Institute of Physics Publishing, 2004;
\$110.00 (hardcover).

Given that this book is part of a series on optics and optoelectronics, one would expect it to be a treatise on optics. Instead, readers will find that it is actually about mechanics and mechanical engineering. In the editor's words, it is a collection of case studies without a "detailed exposition of the theory of Moiré." Thus, the book will be useful to mechanical engineers and to experienced users of Moiré techniques. The text is organized into several chapters that treat particular mechanical problems. The numerous references are grouped at the end of each chapter. The index is short and informative.

[Review by Dejan Pantelić, a researcher at the Institute of Physics, Belgrade, Serbia.]