Preface

The ninth edition continues to streamline both the text materials and the software support providing a broad focus on algorithmic and practical implementation of Operations Research techniques.

- For the first time in this book, the new Section 3.7 provides a comprehensive (math-free) framework of how the different LP algorithms (simplex, dual simplex, revised simplex, and interior point) are implemented in commercial codes (e.g., CPLEX and XPRESS) to provide the computational speed and accuracy needed to solve very large problems.
- The new Chapter 10 covers efficient heuristics/metaheristics designed to find good approximate solution for integer and combinatorial programming problems. The need for the heuristics/metaheristics is in recognition of the fact that the performance of the exact algorithms has been less than satisfactory from the computational standpoint
- The new Chapter 11 is dedicated to the important traveling salesperson problem. The presentation includes a variety of applications and the development of exact and heuristic solution algorithms.
- All the algorithms in the new Chapters 10 and 11 are coded in Excel in a manner that permits convenient interactive experimentation with the models.

- All detailed AMPL models have been moved to Appendix C to complement the AMPL syntactical rules presented in the Appendix. The models are cross-referenced opportunely in the book.
- Numerous new problems have been added throughout the book.
- The TORA software has been updated.
- In keeping with my commitment to maintain a reasonable count of printed pages, I found it necessary to move some material to the CD, including the AMPL appendix.

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