



## TABLE OF CONTENTS

## PART I: Models, Motivation and Methods

## PART II: Numerical Procedures

<b>Chapter 2.</b>	<b>Approximations in Stochastic Programming</b>	
	<i>P. Kall, A. Ruszczyński, K. Frauendorfer</i>	33
<b>Chapter 3.</b>	<b>Large Scale Linear Programming Techniques</b>	
	<i>R.J-B Wets</i>	65
<b>Chapter 4.</b>	<b>Nonlinear Programming Techniques Applied to</b>	
	<b>Stochastic Programs with Recourse</b>	
	<i>L. Nazareth, R.J-B Wets</i>	95
<b>Chapter 5.</b>	<b>Numerical Solution of Probabilistic Constrained</b>	
	<b>Programming Problems</b>	
	<i>A. Prékopa</i>	123
<b>Chapter 6.</b>	<b>Stochastic Quasigradient Methods</b>	
	<i>Yu. Ermoliev</i>	141
<b>Chapter 7.</b>	<b>Multidimensional Integration and Stochastic</b>	
	<b>Programming</b>	
	<i>I. Deák</i>	187
<b>Chapter 8.</b>	<b>Stochastic Integer Programming</b>	
	<i>A.R. Kan, L. Stougie</i>	201

## PART III: Implementation

<b>Chapter 11.</b>	Conditional Probability and Conditional Expectation of a Random Vector <i>H. Gassmann</i> . . . . .	237
<b>Chapter 12.</b>	An <i>L</i> -shaped Method Computer Code for Multi- stage Stochastic Linear Programs <i>J.R. Birge</i> . . . . .	255
<b>Chapter 13.</b>	The Relationship Between the <i>L</i> -shaped Method and Dual Basis Factorization for Stochastic Linear Programming <i>J.R. Birge</i> . . . . .	267
<b>Chapter 14.</b>	Design and Implementation of a Stochastic Program- ming Optimizer with Recourse and Tenders <i>L. Nazareth</i> . . . . .	273
<b>Chapter 15.</b>	Finite Generation Method <i>A.J. King</i> . . . . .	295
<b>Chapter 16.</b>	Implementation of Stochastic Quasigradient Methods <i>A. Gaivoronski</i> . . . . .	313
<b>Chapter 17.</b>	Stepsize Rules, Stopping Times and their Implemen- tation in Stochastic Quasigradient Algorithms <i>G.Ch. Pflug</i> . . . . .	353
<b>Chapter 18.</b>	Adaptive Stochastic Quasigradient Methods <i>S. Uryasiev</i> . . . . .	373
<b>Chapter 19.</b>	A Note about Projections in the Implementation of Stochastic Quasigradient Methods <i>R.T. Rockafellar, R.J-B Wets</i> . . . . .	385
<b>Chapter 20.</b>	Decent Stochastic Quasigradient Methods <i>K. Marti</i> . . . . .	393
<b>Chapter 21.</b>	Stochastic Integer Programming by Dynamic Programming <i>B.J. Lageweg, J.K. Lenstra, A.R. Kan, L. Stougie</i> . . . . .	403
<b>PART IV: Applications and Test Problems</b>		
<b>Chapter 22.</b>	Facility Location Problem <i>Yu. Ermoliev</i> . . . . .	413
<b>Chapter 23.</b>	Lake Eutrophication Management: The Lake Balaton Project <i>A.J. King, R.T. Rockafellar, L. Somlyódy, R.J-B Wets</i> . . . . .	435

Chapter 24.	Optimal Investments for Electricity Generation: A Stochastic Model and a Test-Problem <i>F.V. Louveau, Y. Smeers</i>	445
Chapter 25.	Some Applications of Stochastic Optimization Methods to the Electric Power System <i>C. Nedeva</i>	455
Chapter 26.	Power Generation Planning with Uncertain Demand <i>O. Janssens de Bisthoven, P. Schuchewytsch, Y. Smeers</i>	465
Chapter 27.	Exhaustible Resource Models with Uncertain Returns from Exploration Investment <i>J.R. Birge</i>	481
Chapter 28.	A Two-Stage Stochastic Facility-Location Problem with Time-Dependent Supply <i>S.W. Wallace</i>	489
Chapter 29.	Some Test Problems for Stochastic Nonlinear Multistage Programs <i>X. deGroote, M.C. Noël, Y. Smeers</i>	515
Chapter 30.	Stochastic Programming Problems: Examples from the Literature <i>A.J. King</i>	543