

Contents

1.	Introduction	9
2.	Relations between multiobjective optimization, decision problems of stochastic optimization and parametric optimization	27
2.1.	Discussion of several concepts for a "solution" in multiobjective optimization and optimization problems with random coefficients, respectively	27
2.2.	Characterization of admissible points for multiobjective and stochastic optimization problems in terms of parametric optimization	34
3.	Solution algorithms for linear one- and two-parametric optimization	50
3.1.	Introduction	50
3.2.	Theoretical foundation	52
3.3.	Algorithms for linear one- and two-parametric optimization	58
	Algorithm AI(0, η)	58
	Algorithm AI(ν , 0)	64
	Algorithm AI(ν , η)	69
	Algorithm AI(t)	84
3.4.	An outlook on discrete dynamic linear parametric optimization	91
4.	Solution algorithms for differentiable nonlinear one-parametric optimization problems	96
4.1.	Introduction	96
4.2.	Theoretical foundation	102
4.3.	Two continuation methods	112
5.	A common approach to the treatment of multiobjective optimization problems and stochastic optimization problems using dialogue procedures	120
5.1.	Preliminary remarks	120
5.2.	On dialogue algorithms based on parametric optimization	125
5.3.	The proposed algorithm in comparison to some other selected approaches in multiobjective optimization	138
6.	Examples	141
6.1.	Optimization of production plans in agriculture	141
6.2.	A sampling problem	146
6.3.	A dynamic transportation problem	153
6.4.	Optimization of complex systems under stochastic disturbances	155
	Bibliography	161