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Nota di contenuto	Introduction -- Review of multiresponse optimisation approaches -- An intelligent, integrated, problem-independent method for multiresponse process optimisation -- Implementation of an intelligent, integrated, problem-independent method to multiresponse process optimisation -- Case studies -- Conclusion.
Sommario/riassunto	This book presents an intelligent, integrated, problem-independent method for multiresponse process optimization. In contrast to traditional approaches, the idea of this method is to provide a unique model for the optimization of various processes, without imposition of assumptions relating to the type of process, the type and number of process parameters and responses, or interdependences among them. The presented method for experimental design of processes with multiple correlated responses is composed of three modules: an expert system that selects the experimental plan based on the orthogonal arrays; the factor effects approach, which performs processing of experimental data based on Taguchi’s quality loss function and multivariate statistical methods; and process modeling and optimization based on artificial neural networks and metaheuristic optimization algorithms. The implementation is demonstrated using four case studies relating to high-tech industries and advanced, non-conventional processes.