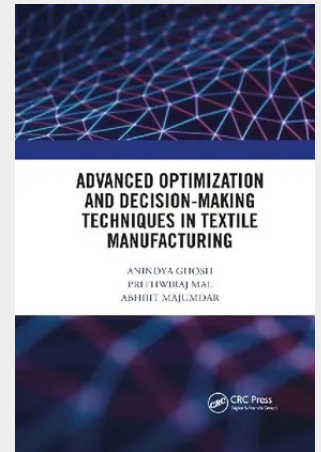


Advanced Optimization and Decision-Making Techniques in Textile Manufacturing

Optimization and decision making are integral parts of any manufacturing process and management system. The objective of this book is to demonstrate the confluence of theory and applications of various types of multi-criteria decision making and optimization techniques with reference to textile manufacturing and management. Divided into twelve chapters, it discusses various multi-criteria decision-making methods such as AHP, TOPSIS, ELECTRE, and optimization techniques like linear programming, fuzzy linear programming, quadratic programming, in textile domain. Multi-objective optimization problems have been dealt with two approaches, namely desirability function and evolutionary algorithm. Key Features - Exclusive title covering textiles and soft computing fields including optimization and decision making - Discusses concepts of traditional and non-traditional optimization methods with textile examples - Explores pertinent single-objective and multi-objective optimizations - Provides MATLAB coding in the Appendix to solve various types of multi-criteria decision making and optimization problems - Includes examples and case studies related to textile engineering and management

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