DESCRIPTION

Multidisciplinary Design Optimization supported by Knowledge Based Engineering supports engineers confronting this daunting and new design paradigm. It describes methodology for conducting a system design in a systematic and rigorous manner that supports human creativity to optimize the design objective(s) subject to constraints and uncertainties. The material presented builds on decades of experience in Multidisciplinary Design Optimization (MDO) methods, progress in concurrent computing, and Knowledge Based Engineering (KBE) tools.

Key features:

• Comprehensively covers MDO and is the only book to directly link this with KBE methods

• Provides a pathway through basic optimization methods to MDO methods

• Directly links design optimization methods to the massively concurrent computing technology

• Emphasizes real world engineering design practice in the application of optimization methods

Multidisciplinary Design Optimization supported by Knowledge Based Engineering is a one-stop-shop guide to the state-of-the-art tools in the MDO and KBE disciplines for systems design engineers and managers. Graduate or post-graduate students can use it to support their design courses, and researchers or developers of computer-aided design methods will find it useful as a wide-ranging reference.