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Altri autori (Persone)	HoyleChristopher WassenaarHenk Jan
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to the Decision-Based Design Approach -- Decision Theory in Engineering Design -- Fundamentals of Analytical Techniques for Modeling Consumer Preferences and Choices -- Decision-Based Design Framework -- Incorporating Consumer Choice Modeling in Engineering Design -- A Step-by-Step Procedure -- Product Attribute Function Deployment for Attributes Identification -- Design of Human Appraisal Experiments in Data Collection -- Data Analysis Techniques to Support Demand Model Estimation -- Hierarchical Choice Modeling to Support Complex Systems Design -- Multi-level Optimization for Decision-Based Design -- Latent Variable Modeling -- An Enterprise-Driven Approach to Product Family Design -- Closure.
Sommario/riassunto	Building upon the fundamental principles of decision theory, Decision-Based Design: Integrating Consumer Preferences into Engineering Design presents an analytical approach to enterprise-driven Decision-Based Design (DBD) as a rigorous framework for decision making in engineering design. Once the related fundamentals of decision theory, economic analysis, and econometrics modelling are established, the remaining chapters describe the entire process, the associated

analytical techniques, and the design case studies for integrating consumer preference modeling into the enterprise-driven DBD framework. Methods for identifying key attributes, optimal design of human appraisal experiments, data collection, data analysis, and demand model estimation are presented and illustrated using engineering design case studies. The scope of the chapters also provides:

- A rigorous framework of integrating the interests from both producer and consumers in engineering design,
- Analytical techniques of consumer choice modelling to forecast the impact of engineering decisions,
- Methods for synthesizing business and engineering models in multidisciplinary design environments, and
- Examples of effective application of Decision-Based Design supported by case studies.

• Guidance for computer implementation of the methods presented using open-source software tools

No matter whether you are an engineer facing decisions in consumer related product design, an instructor or student of engineering design, or a researcher exploring the role of decision making and consumer choice modelling in design, *Decision-Based Design: Integrating Consumer Preferences into Engineering Design* provides a reliable reference over a range of key topics.
