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	Nota di contenuto	Chapter 1. Multicriteria Decision Methods for RRM Models -- Chapter 2. Comparing Cardinal and Ordinal Ranking in MCDM Methods -- Chapter 3. Evaluating Multi-Criteria Decisions Under Conditions of Strong Uncertainty -- Chapter 4. A Framework for Building Multicriteria Decision Models with regard to Relia-bility, Risk and Maintenance -- Chapter 5. A Participatory MCDA Approach to Energy Transition Policy Formation -- Chapter 6. A proposition of a multidimensional HAZOP analysis (MHAZOP) to support a decision-making process -- Chapter 7. Multidimensional risk evaluation in natural gas pipelines: contributions from sensitivity analysis and risk visualization to improving the management of risk -- Chapter 8. Multidimensional Decision-Making Process for managing flood risks in postmodern cities: challenges, trends, and sharing insights to construct models that deal with climate

changes -- Chapter 9. Multicriteria decision model to support maintenance planning in sewage systems -- Chapter 10. A Multicriteria Model to Determine Maintenance Policy for a Protection System Subject to Imperfect Maintenance.

Sommario/riassunto

This book considers a broad range of areas from decision making methods applied in the contexts of Risk, Reliability and Maintenance (RRM). Intended primarily as an update of the 2015 book Multicriteria and Multiobjective Models for Risk, Reliability and Maintenance Decision Analysis, this edited work provides an integration of applied probability and decision making. Within applied probability, it primarily includes decision analysis and reliability theory, amongst other topics closely related to risk analysis and maintenance. In decision making, it includes multicriteria decision making/aiding (MCDM/A) methods and optimization models. Within MCDM, in addition to decision analysis, some of the topics related to mathematical programming areas are considered, such as multiobjective linear programming, multiobjective nonlinear programming, game theory and negotiations, and multiobjective optimization. Methods related to these topics have been appliedto the context of RRM. In MCDA, several other methods are considered, such as outranking methods, rough sets and constructive approaches. The book addresses an innovative treatment of decision making in RRM, improving the integration of fundamental concepts from both areas of RRM and decision making. This is accomplished by presenting current research developments in decision making on RRM. Some pitfalls of decision models on practical applications on RRM are discussed and new approaches for overcoming those drawbacks are presented.