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Descrizione fisica	1 online resource (XXIV, 167 p.) : 32 illus., 20 illus. in color
Collana	Springer Aerospace Technology, , 1869-1730
Disciplina	629.1
Soggetti	Aeronautics - Safety measures Aeronautics, Commercial - Technological innovations Air traffic capacity Aerospace Technology and Astronautics Quality Control, Reliability, Safety and Risk Performance and Reliability Systems Theory, Control Risk Management Control and Systems Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Assessing the System Safety Using Reliability Theory and PSA Methods -- New Doctrine "Reliability, Risk, Safety" for System Safety (Flight Safety) Assessment on The Basis of the Fuzzy Sets Approach -- Solving the Rare Events Problem with the Fuzzy Sets Method -- Structure and Principles of Constructing the SMSs to Provide and Monitor System Safety Based on the RRS Risk Management Doctrine -- Algorithms and Methods for ATS Safety Monitoring and Assurance Using Methods for Calculating Risks in the RRS Doctrine -- Assessing Safety of Dual-Purpose Systems -- Conclusion.
Sommario/riassunto	This book provides a solution to "rare event" problems without using the classical theory of reliability and theory of probability. This solution is based on the methodology of risk assessment as "measure of danger" (in keeping with the ICS RAS) and an expert approach to determining systems' safety indications using Fuzzy Sets methods.

Further, the book puts forward a new concept: “Reliability, Risks, and Safety” (RRS). The book’s main goal is to generalize present results and underscore the need to develop an alternative approach to safety level assessment and risk management for technical (aviation) systems in terms of Fuzzy Sets objects, in addition to traditional probabilistic safety analysis (PSA). The concept it proposes incorporates ICAO recommendations regarding proactive system control and the system’s responses to various internal and external disturbances. .
