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	Autore	Cheng Chi-Bin
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	ISBN	9789819612352
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	Descrizione fisica	1 online resource (284 pages)
	Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 228
	Altri autori (Persone)	ShyurHuan-Jyh
	Disciplina	658.155
	Soggetti	Financial risk management
		Machine learning
		Transportation engineering
		Traffic engineering
		Artificial intelligence
		Risk Management
		Statistical Learning
		Transportation Technology and Traffic Engineering
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	Lingua di pubblicazione	Inglese
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	Nota di contenuto	Introduction to Flight Safety -- Proactive Flight Safety Programs -- Introduction to Artificial Intelligence -- Flight Safety Management with Machine Learning -- Flight Operations Risk Assessment System: System Structure and Methodology -- Flight Operations Risk Assessment System: System Design and Implementation -- En-Route Flight Risk Assessment -- Automatic Causal Analysis and Reporting of Hard Landing Events -- Aging Aircraft Management -- Business Intelligence and Flight Safety Performance Dashboard.
	Sommario/riassunto	This book offers a comprehensive overview of using artificial intelligence and quantitative approaches in many phases of flight safety management, from proactive assessment of potential risks of flights before taking-off to automatic analysis of occurred flight events, for commercial airlines. Flight safety is commonly the core values of

airlines. Serious flight disasters always bring tremendous impacts and losses to the industry and the society; thus, airlines and the authorities always treat the issues of flight safety management as the first priority. It presents the information systems that assist the safety staff and managers to adopt preventive operations or to analyze the critical factors or operations that cause a flight event. Such information systems were developed based on artificial intelligence and quantitative approaches, including fuzzy logic, expert systems, deep learning, decision-making methods, reliability theory, and data mining. After introducing the flight safety management practice and common programs, as well as basic artificial intelligence and quantitative approaches, the book describes in detail the information systems we have developed and provides instructions for flight safety practitioners to implement such information systems in their organizations. Case studies collected from the cooperated airline are also presented.