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| Nota di contenuto | Mathematical methods for Reliability Engineering and Computational Intelligence -- Experimental Survey of Algorithms for the Calculation of Node Traversal Probabilities in Multi-valued Decision Diagrams -- Reliability Analysis of Data Storage Using Survival Signature and Logic Differential Calculus -- Digital techniques for Reliability Engineering and Computational Intelligence -- Software tests quality evaluation using code mutants -- Hacking DCNs. |
| Sommario/riassunto | This book offers insight into the current issues of the merger between reliability engineering and computational intelligence. The intense development of information technology allows for designing more complex systems as well as creating more detailed models of real-world systems which forces traditional reliability engineering approaches based on Boolean algebra, probability theory, and statistics to embrace the world of data science. The works deal with methodological developments as well as applications in the development of safe and reliable systems in various kinds of distribution networks, in the development of highly reliable healthcare systems, in finding weaknesses in systems with the human factor, or in reliability analysis of large information systems and other software solutions. In this book, experts from various fields of reliability |

engineering and computational intelligence present their view on the risks, the opportunities and the synergy between reliability engineering and computational intelligence that have been developed separately but in recent years have found a way to each other. The topics addressed include the latest advances in computing technology to improve the real lives of millions of people by increasing safety and reliability of various types of real-life systems by increasing the availability of software services, reducing the accident rate of means of transport, developing high reliable patient-specific health care, or generally, save cost and increase efficiency in the work and living environment. Though this book, the reader has access to professionals and researchers in the fields of reliability engineering and computational intelligence that share their experience in merging the two as well as an insight into the latest methods, concerns and application domains.