Record Nr. UNINA9910741141103321 Autore Pandey Ajeet Kumar Titolo Early Software Reliability Prediction: A Fuzzy Logic Approach / / by Ajeet Kumar Pandey, Neeraj Kumar Goyal New Delhi:,: Springer India:,: Imprint: Springer,, 2013 Pubbl/distr/stampa **ISBN** 9788132211761 8132211766 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (XIX, 153 p.) Collana Studies in Fuzziness and Soft Computing, , 1434-9922; ; 303 Disciplina 006.3 Soggetti Computational intelligence Software engineering Statistics Computational Intelligence Software Engineering Statistics and Computing/Statistics Programs Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- Backgrounds: Software Quality and Reliability Prediction -- Early Fault Prediction using Software Metrics and Process Maturity --Multistage Model for Residual Fault Prediction -- Prediction and Ranking of Fault-prone Software Modules -- Reliability Centric Test Case Prioritization -- Software Reliability and Operational Profile --Appendices -- References. The development of software system with acceptable level of reliability Sommario/riassunto and quality within available time frame and budget becomes a challenging objective. This objective could be achieved to some extent through early prediction of number of faults present in the software. which reduces the cost of development as it provides an opportunity to make early corrections during development process. The book presents

an early software reliability prediction model that will help to grow the reliability of the software systems by monitoring it in each development

approaches are discussed in this book to tackle this challenging issue. An important approach presented in this book is a model to classify the

phase, i.e. from requirement phase to testing phase. Different

modules into two categories (a) fault-prone and (b) not fault-prone. The methods presented in this book for assessing expected number of faults present in the software, assessing expected number of faults present at the end of each phase and classification of software modules in fault-prone or no fault-prone category are easy to understand, develop and use for any practitioner. The practitioners are expected to gain more information about their development process and product reliability, which can help to optimize the resources used.