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Titolo	Statistical Modeling for Degradation Data // edited by Ding-Geng (Din) Chen, Yuhlong Lio, Hon Keung Tony Ng, Tzong-Ru Tsai
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Descrizione fisica	1 online resource (XVIII, 376 p. 109 illus., 67 illus. in color.)
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Disciplina	519.5
Soggetti	Statistics Statistical Theory and Methods Statistics in Business, Management, Economics, Finance, Insurance
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I. Review and Theoretical Framework -- Chapter 1: Stochastic Accelerated Degradation Models Based on a Generalized Cumulative Damage Approach -- Chapter 2: Hierarchical Bayesian Change-Point Analysis for Nonlinear Degradation Data -- Chapter 3: Degradation Modeling, Analysis, and Applications on Residual Life Prediction -- Chapter 4: On Some Shock Models with Poisson and Generalized Poisson Shock Processes -- Chapter 5: Degradation Based Reliability Modeling and Assessment of Complex Systems in Dynamic Environments -- Chapter 6: A Survey of the Modeling and Applications on Non-Destructive and De-structive Degradation Tests -- II. Modeling and Experimental Designs -- Chapter 7: Degradation Test Plan for a Nonlinear Random-Coefficients Model -- Chapter 8: Optimal Designs for LED Degradation Modeling -- Chapter 9: Gamma Degradation Models: Inferences and Optimal Designs -- Chapter 10: Model Misspecification analysis of Inverse Gaussian and Gamma Degradation Processes -- III. Applications -- Chapter 11: Practical Application of Fréchet Shock-Degradation Models for System Failures -- Chapter 12: Statistical Methods for Thermal Index Estimation Based on Accelerated Destructive Degradation Test Data -- Chapter 13: Inference on Remaining Useful Life Under Gamma Degradation Models with Random effects.-- Chapter 14: ADDT: An R Package for Analysis of Accelerated Destructive Degradation Test Data -- Chapter 15: Modeling and

Inference of CD4 Data. .

Sommario/riassunto

This book focuses on the statistical aspects of the analysis of degradation data. In recent years, degradation data analysis has come to play an increasingly important role in different disciplines such as reliability, public health sciences, and finance. For example, information on products' reliability can be obtained by analyzing degradation data. In addition, statistical modeling and inference techniques have been developed on the basis of different degradation measures. The book brings together experts engaged in statistical modeling and inference, presenting and discussing important recent advances in degradation data analysis and related applications. The topics covered are timely and have considerable potential to impact both statistics and reliability engineering.