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| 1. Record Nr.           | UNINA9910452282203321   |
| Autore                  | Hocking R. R (Ronald R.), <1932->   |
| Titolo                  | Methods and applications of linear models : regression and the analysis of variance // Ronald R. Hocking, PenHock Statistical Consultants   |
| Pubbl/distr/stampa      | Hoboken, New Jersey : , : John Wiley & Sons, , 2013   |
| ISBN                    | 1-118-59302-2<br>1-118-64019-5<br>1-118-59304-9   |
| Edizione                | [3rd ed.]   |
| Descrizione fisica      | 1 online resource (717 p.)  |
| Collana                 | Wiley Series in Probability and Statistics  |
| Classificazione         | MAT029000   |
| Disciplina              | 519.5/36  |
| Soggetti                | Regression analysis<br>Analysis of variance<br>Linear models (Statistics)<br>MATHEMATICS / Probability & Statistics / General<br>Electronic books.  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | Description based upon print version of record.   |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | Methods and Applications of Linear Models; Contents; Preface to the Third Edition; Preface to the Second Edition; Preface to the First Edition; PART I REGRESSION; 1 Introduction to Linear Models; 1.1 Background Information; 1.2 Mathematical and Statistical Models; 1.3 Definition of the Linear Model; 1.4 Examples of Regression Models; 1.4.1 Single-Variable, Regression Model; 1.4.2 Regression Models with Several Inputs; 1.4.3 Discrete Response Variables; 1.4.4 Multivariate Linear Models; 1.5 Concluding Comments; Exercises; 2 Regression on Functions of One Variable<br>2.1 The Simple Linear Regression Model2.2 Parameter Estimation; 2.2.1 Least Squares Estimation; 2.2.2 Maximum Likelihood Estimation; 2.2.3 Coded Data: Centering and Scaling; 2.2.4 The Analysis of Variance Table; 2.3 Properties of the Estimators and Test Statistics; 2.3.1 Moments of Linear Functions of Random Variables; 2.3.2 Moments of Least Squares Estimators; 2.3.3 Distribution of the Least Squares Estimators; 2.3.4 The Distribution of Test Statistics; 2.4 The Analysis of Simple Linear Regression Models; 2.4.1 Two Numerical Examples; 2.4.2 |

## A Test for Lack-of-Fit

2.4.3 Inference on the Parameters of the Model  
2.4.4 Prediction and Prediction Intervals; 2.5 Examining the Data and the Model; 2.5.1 Residuals; 2.5.2 Outliers, Extreme Points, and Influence; 2.5.3 Normality, Independence, and Variance Homogeneity; 2.6 Polynomial Regression Models; 2.6.1 The Quadratic Model; 2.6.2 Higher Ordered Polynomial Models; 2.6.3 Orthogonal Polynomials; 2.6.4 Regression through the Origin; Exercises; 3 Transforming the Data; 3.1 The Need for Transformations; 3.2 Weighted Least Squares; 3.3 Variance Stabilizing Transformations  
3.4 Transformations to Achieve a Linear Model  
3.4.1 Transforming the Dependent Variable; 3.4.2 Transforming the Predictors; 3.5 Analysis of the Transformed Model; 3.5.1 Transformations with Forbes Data; Exercises; 4 Regression on Functions of Several Variables; 4.1 The Multiple Linear Regression Model; 4.2 Preliminary Data Analysis; 4.3 Analysis of the Multiple Linear Regression Model; 4.3.1 Fitting the Model in Centered Form; 4.3.2 Estimation and Analysis of the Original Data; 4.3.3 Model Assessment and Residual Analysis; 4.3.4 Prediction; 4.3.5 Transforming the Response  
4.4 Partial Correlation and Added-Variable Plots  
4.4.1 Partial Correlation; 4.4.2 Added-Variable Plots; 4.4.3 Simple Versus Partial Correlation; 4.5 Variable Selection; 4.5.1 The Case of Orthogonal Predictors; 4.5.2 Criteria for Deletion of Variables; 4.5.3 Nonorthogonal Predictors; 4.5.4 Computational Considerations; 4.5.5 Selection Strategies; 4.6 Model Specification; 4.6.1 Application to Subset Selection; 4.6.2 Improved Mean Squared Error; 4.6.3 Development of the Cp Statistic; Exercises; 5 Collinearity in Multiple Linear Regression; 5.1 The Collinearity Problem; 5.1.1 Introduction  
5.1.2 A Simple Example

### Sommario/riassunto

"The new edition of this "essential desktop reference book. [that] should definitely be on your bookshelf" (Technometrics) features a newly reorganized approach to linear regression that promotes the understanding of theory and models concurrently, featuring newly-developed topics in the field and the use of software applications. It includes numerous exercises; graphics and computations developed using JMP software; a new chapter on recent developments with the distribution of linear and quadratic forms; and new topical coverage of least squares, the cell means model, and more"--  
"The objective of this book is to present a discussion and a formal definition of a general class of linear models"--

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| 2. Record Nr.           | UNINA9910339731803321  |
| Titolo                  | CD-ROM professional  |
| Pubbl/distr/stampa      | Weston, CT, : Pemberton Press, ©1990-©1996   |
| Descrizione fisica      | 1 online resource  |
| Disciplina              | 004.5/6  |
| Soggetti                | CD-ROMs<br>CD-ROM publishing<br>Cd-roms<br>Multimedia<br>OPTICAL DISCS<br>INFORMATION SYSTEMS<br>CD-ROM<br>ELECTRONIC MAIL<br>Ordinateurs - Mémoires optiques<br>Cédéroms<br>Édition sur cédérom<br>Periodicals.<br>Periodical |
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| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Periodico  |
| Note generali           | Title from cover.<br>"The magazine of optical information media."<br>Place of publication varies: <1993>-1996, Wilton, CT.<br>Published: Wilton, CT : Online Inc., -1996.<br>Refereed/Peer-reviewed                            |