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| Autore                  | Birkes David                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Titolo                  | Alternative methods of regression [[electronic resource] /] / David Birkes, Yadolah Dodge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Soggetti                | Regression analysis<br>Multivariate analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| Nota di contenuto       | Alternative Methods of Regression; Contents; Preface; Acknowledgments; 1. Linear Regression Analysis; 1.1 Introduction; 1.2 Example; 1.3 The Linear Regression Model; 1.4 Estimating the Regression Coefficients; 1.5 Testing the Significance of the Relationship; 1.6 The Need for Alternative Methods; 1.7 The Origin of the Word "Regression"; Notes; References; 2. Constructing and Checking the Model; 2.1 Introduction; 2.2 Checking the Model; 2.3 Modifying the Model; 2.4 Examples; Notes; References; 3. Least-Squares Regression; 3.1 Introduction; 3.2 An Example of Simple Regression<br>3.3 Estimating the Regression Line<br>3.4 Testing $\beta = 0$ ; 3.5 Checking Normality; 3.6 An Example of Multiple Regression; 3.7 Estimating the Regression Coefficients; 3.8 Testing the Regression Coefficients; 3.9 Testing $\beta_1 + \beta_2 + \dots + \beta_p = 0$ ; 3.10 Testing $\beta = 0$ ; 3.11 The Coefficient of Determination; 3.12 Computation; Notes; References; 4. Least-Absolute-Deviations Regression; 4.1 Introduction; 4.2 Estimating the Regression Line; 4.3 Nonuniqueness and Degeneracy; 4.4 Testing $\beta = 0$ ; 4.5 An Example of Multiple Regression; 4.6 Estimating the |

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5. M-Regression; 5.1 Introduction; 5.2 An Example of Simple

Regression; 5.3 Estimating the Regression Line; 5.4 Testing  $= 0$ ; 5.5

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Standardization

8.6 Estimating the Regression Coefficients; 8.7 Collinearity; Notes;

References; 9. Comparisons; 9.1 Introduction; 9.2 Comparison of

Properties; 9.3 Comparisons on Three Data Sets; Notes; References; 10.

Other Methods; 10.1 Introduction; 10.2 Other Methods of Linear

Regression; 10.3 More General Methods of Regression; References;

Appendix; Student's t-Distribution; F-Distribution; Chi-squared

Distribution; Index

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### Sommario/riassunto

Of related interest. Nonlinear Regression Analysis and its Applications Douglas M. Bates and Donald G. Watts ""an extraordinary presentation of concepts and methods concerning the use and analysis of nonlinear regression models.highly recommend[ed].for anyone needing to use and/or understand issues concerning the analysis of nonlinear regression models."" --Technometrics This book provides a balance between theory and practice supported by extensive displays of instructive geometrical constructs. Numerous in-depth case studies illustrate the use of nonlinear regression analysis--with all data

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