

1. Record Nr.	UNINA9910830134903321
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Titolo	Applied longitudinal analysis / / Garrett M. Fitzmaurice, Nan M. Laird, James H. Ware
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , [2011] ©2011
ISBN	1-119-51346-4 1-118-55179-6
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (1309 p.)
Collana	Wiley series in probability and statistics
Classificazione	MAT029000
Disciplina	519.5/3 519.53
Soggetti	Longitudinal method Regression analysis Multivariate analysis Medical statistics
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 (pages 671-693) and index.
Nota di contenuto	Cover; Half Title page; Title page; Copyright page; Dedication; Preface; Preface to First Edition; Acknowledgments; Part I: Introduction to Longitudinal and Clustered Data; Chapter 1: Longitudinal and Clustered Data; 1.1 Introduction; 1.2 Longitudinal and Clustered Data; 1.3 Examples; 1.4 Regression Models for Correlated Responses; 1.5 Organization of the Book; 1.6 Further Reading; Chapter 2: Longitudinal Data: Basic Concepts; 2.1 Introduction; 2.2 Objectives of Longitudinal Analysis; 2.3 Defining Features of Longitudinal Data; 2.4 Example: Treatment of Lead-Exposed Children Trial 2.5 Sources of Correlation in Longitudinal Data 2.6 Further Reading; Part II: Linear Models for Longitudinal Continuous Data; Chapter 3: Overview of Linear Models for Longitudinal Data; 3.1 Introduction; 3.2 Notation and Distributional Assumptions; 3.3 Simple Descriptive Methods of Analysis; 3.4 Modeling the Mean; 3.5 Modeling the Covariance; 3.6 Historical Approaches; 3.7 Further Reading; Chapter 4: Estimation and Statistical Inference; 4.1 Introduction; 4.2 Estimation: Maximum Likelihood; 4.3 Missing Data Issues; 4.4 Statistical Inference;

#### 4.5 Restricted Maximum Likelihood (REML) Estimation

4.6 Further Reading  
Chapter 5: Modeling the Mean: Analyzing Response Profiles; 5.1 Introduction; 5.2 Hypotheses Concerning Response Profiles; 5.3 General Linear Model Formulation; 5.4 Case Study; 5.5 One-Degree-of-Freedom Tests for Group by Time Interaction; 5.6 Adjustment for Baseline Response; 5.7 Alternative Methods of Adjusting for Baseline Response; 5.8 Strengths and Weaknesses of Analyzing Response Profiles; 5.9 Computing: Analyzing Response Profiles Using PROC MIXED in SAS; 5.10 Further Reading; Chapter 6: Modeling the Mean: Parametric Curves; 6.1 Introduction; 6.2 Polynomial Trends in Time; 6.3 Linear Splines; 6.4 General Linear Model Formulation; 6.5 Case Studies; 6.6 Computing: Fitting Parametric Curves Using PROC MIXED in SAS; 6.7 Further Reading; Chapter 7: Modeling the Covariance; 7.1 Introduction; 7.2 Implications of Correlation among Longitudinal Data; 7.3 Unstructured Covariance; 7.4 Covariance Pattern Models; 7.5 Choice among Covariance Pattern Models; 7.6 Case Study; 7.7 Discussion: Strengths and Weaknesses of Covariance Pattern Models; 7.8 Computing: Fitting Covariance Pattern Models Using PROC MIXED in SAS; 7.9 Further Reading  
Chapter 8: Linear Mixed Effects Models; 8.1 Introduction; 8.2 Linear Mixed Effects Models; 8.3 Random Effects Covariance Structure; 8.4 Two-Stage Random Effects Formulation; 8.5 Choice among Random Effects Covariance Models; 8.6 Prediction of Random Effects; 8.7 Prediction and Shrinkage; 8.8 Case Studies; 8.9 Computing: Fitting Linear Mixed Effects Models Using PROC MIXED in SAS; 8.10 Further Reading; Chapter 9: Fixed Effects versus Random Effects Models; 9.1 Introduction; 9.2 Linear Fixed Effects Models; 9.3 Fixed Effects versus Random Effects: Bias-Variance Trade-off; 9.4 Resolving the Dilemma of Choosing Between Fixed and Random Effects Models

#### Sommario/riassunto

"Since the publication of the first edition, the authors have solicited feedback from both the instructors who use the book as a text for their courses as well as the researchers who use the book as a resource for their research. Thus, the improved Second Edition of Applied Longitudinal Analysis features many additions and revisions based on the feedback of readers, making it the go-to reference for applied use in public health, epidemiology, and pharmaceutical sciences"--