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Longitudinal Analysis (Statistical Associates Blue Book Series 39)

G. David Garson

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Longitudinal Analysis (Statistical Associates Blue Book Series 39) G. David Garson
An introductory graduate level text on longitudinal analysis using SPSS, SAS, and Stata.

328 pages

Longitudinal analysis is an umbrella term for a variety of statistical procedures which deal with any type of data which is measured over time. Sections of this volume group longitudinal analysis methods under the following categories:

Time series analysis, often used for projecting economic or other time series, with or without additional independent variables. Includes ARIMA models.

Linear regression models, which incorporate time as an independent variable.

Panel data regression models,

Repeated measures GLM, used to implement analysis of variance and regression models.

General estimating equations analysis (GEE), used to implement nonlinear forms of regression modeling, including logistic and probit regression for repeated measures data.

Linear mixed modeling (LMM), used for multilevel analysis where multiple time periods are treated as a data level.

Generalized linear mixed models for longitudinal data (GLMM), used to implement nonlinear forms of linear mixed modeling

Structural equation modeling (SEM), used for growth curve analysis and modeling change in structural relationships across a limited number of time periods.

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