

***Growth Curve Models and Statistical Diagnostics***

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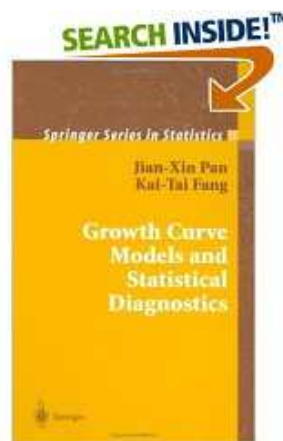


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### Book Description

Growth-curve models are generalized multivariate analysis-of-variance models. The basic idea of the models is to use different polynomials to fit different treatment groups involved in the longitudinal study. It is not uncommon, however, to find outliers and influential observations in growth data that heavily affect statistical inference in growth curve models. This book provides a comprehensive introduction to the theory of growth curve models with an emphasis on statistical diagnostics. A variety of issues on model fittings and model diagnostics are addressed, and many criteria for outlier detection and influential observation identification are created within likelihood and Bayesian frameworks. This book is intended for postgraduates and statisticians whose research involves longitudinal study, multivariate analysis and statistical diagnostics, and also for scientists who analyze longitudinal data and repeated measures. The authors provide theoretical details on the model fittings and also emphasize the application of growth curve models to practical data analysis, which are reflected in the analysis of practical examples given in each chapter. The book assumes a basic knowledge of matrix algebra and linear regression. Jian-Xin Pan is a lecturer in Medical Statistics of Keele University in the U.K. He has published more than twenty papers on growth curve models, statistical diagnostics and linear/non-linear mixed models. He has a long-standing research interest in longitudinal data analysis and repeated measures in medicine and agriculture. Kai-Tai Fang is a chair professor in Statistics of Hong Kong Baptist University and a fellow of the Institute of Mathematical Statistics. He has published several books with Springer-Verlag, Chapman & Hall, and Science Press and is an author or co-author of over one hundred papers. His research interest includes generalized multivariate analysis, elliptically contoured distributions and uniform design.

**Book Info**

Provides a comprehensive introduction to the theory of growth curve models with an emphasis on statistical diagnostics.

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