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Nota di contenuto	Part I Biostatistical Methodology -- Dimension Reduction in High Dimensional Multivariate Time Series Analysis -- Multi-Panel Kendall Plot Applied to Measuring Dependence -- Flexible Optimal Design Strategies -- A Multivariate Spatial Modelling Approach with Nonparametric Cross-covariogram -- A Deterministic Global Optimization Method for Variational Inference -- Part II Statistical Genetics and Bioinformatics -- Subgroup identification with latent Dirichlet allocation -- Dictionary learning based genotype imputation to improve power for association testing -- Integrating Transcriptional Time Lag Information into Gene Regulatory Network Construction -- Optimal experimental designs for fMRI when the model matrix is uncertain -- On Exact and Approximate Distributions of K-homopolymer for iid and Markov Dependent DNA Sequences -- Part III Regulatory Statistics -- Utilizing Seamless Adaptive Designs for NASH Clinical Trials -- A Bayesian Non-inferiority Design with Companion

Constancy Test in Active Controlled Trials -- A Study Design for Utilizing External Data to Augment the Control in a Randomized Controlled Trial -- Some thoughts in designing a Bayesian study: From a statistical reviewer's perspective -- On Weighted Performance Goals in Medical Device Single-Arm Clinical Studies -- Part IV
Biopharmaceutical Research and Applications.-Current Status Data in the Presence of a Terminal Event -- Seamless Phase 2/3 Study Design with an Oncology Example -- A Bayesian meta-analysis method for estimating risk difference of rare events -- Comparison of multi-arm multi-stage design and adaptive randomization in platform clinical trials -- A Calibrated Power Prior Approach to Borrow Information from Historical Data with Application -- A Gatekeeping Test in a Group Sequential Design with Multiple Interim Looks -- Application of Bayesian Methods in Oncology Dose Escalation Studies with Late Onset Toxicity -- Bayesian hierarchical model estimation and comparison of immunogenicity assay cut-points.-Inference for Two-Stage Dynamic Treatment Regimes in the Presence of Drop -- Comparison of different approaches for dynamic prediction of survival using longitudinal data -- Update on progress of ASA Biopharm Safety Monitoring Working Group -- Options for implementing pattern-mixture-based sensitivity analyses.

Sommario/riassunto

This edited volume presents current research in biostatistics with emphasis on biopharmaceutical applications. Featuring contributions presented at the 2017 ICSA Applied Statistics Symposium held in Chicago, IL on June 25 to 28, 2017, this book explores timely topics that have a high potential impact on statistical methodology and future research in biostatistics and biopharmaceuticals. The theme of this conference was Statistics for A New Generation: Challenges and Opportunities, in recognition of the advent of a new generation of statisticians. The conference attracted statisticians working in academia, government, and industry; domestic and international statisticians. From the conference, the editors selected 28 high-quality presentations and invited the speakers to prepare full chapters for this book. These contributions are divided into four parts: Part I Biostatistical Methodology, Part II Statistical Genetics and Bioinformatics, Part III Regulatory Statistics, and Part IV Biopharmaceutical Research and Applications. Featuring contributions on topics such as statistics in genetics, bioinformatics, biostatistical methodology, and statistical computing, this book is beneficial to researchers, academics, practitioners and policy makers in biostatistics and biopharmaceuticals. .
