1. Record Nr. UNINA9910502593003321

Titolo	Modern Statistical Methods for Health Research / / edited by Yichuan Zhao, (Din) Ding-Geng Chen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-72437-9
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (506 pages)
Collana	Emerging Topics in Statistics and Biostatistics, , 2524-7743
Disciplina	610.21
Soggetti	Biometry Medicine - Research Biology - Research Biostatistics Biomedical Research Estadística mèdica Biometria Dades massives Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Alternative Capture-Recapture Point and Interval Estimators Based on Two Surveillance Streams – Lyles, Wilkinson, Williamson, Chen, Taylor, Jambai, Kaiser -- 2. On-Gaussian Model Based Object Tracking Analysis with Time Lapse Fluorescence Microscopy Images – Marcus, Kong -- 3. Detecting Changepoint in Gene Expressions over Time: An Application to Childhood Obesity – Mathur, Sung -- 4. How “Big” Are EHR Data? The Effective Sample Size of EHR Data Under Biased Sampling – Hubbard -- 5. A Nested Clustering Method to Detect and Cluster Transgenerational DNA Methylation Sites via Beta Regressions – Wang, Zhang, Han, Arshad, Karmaus -- 6. Controlling the False Discovery Rate of Grouped Hypotheses – MacDonald, Wilson, Liang, Qin -- 7. Approaches to Combining Phase II Proof-of-Concept and Dose-Finding Trials – Ting -- 8. On the Multiply Robust Estimation with Missing Data – Chen, Haziza -- 9. Recent Advances in Spectral Clustering and Their

Applications in Bioinformatics – Xue -- 10. Functional Data Modeling and Hypothesis Testing for Longitudinal Alzheimer Genome-Wide Association Studies – Li, Xu, Liu -- 11. Misuse of Classifiers in Biological Networks – Maharaj -- 12. A Selective Inference-based Two-stage Procedure for Clinical Safety Studies – Zhu, Guo -- 13. Inferring Stage of HCV Infections as Recent or Chronic by Machine Learning approach – Icer -- 14. Graphical Modeling of Multiple Biological Pathways in Genomic Studies – Cao, Zhang, Chen, Wang -- 15. Online Updating of Nonparametric Survival Estimator and Nonparametric Survival Test – Xue, Schifano, Hu -- 16. Mixed-Effects Negative Binomial Regression with Interval Censoring: A Simulation Study and Application to Precipitation and All-Cause Mortality Rates among Black South Africans over 1997-2013 – Landon, Lyles, Scovronick, Abadi, Bilotta, Hauer, Bell, Gribble -- 17. SAS Macros for Linear Mediation Analysis of Complex Survey Data Using Balanced Repeated Replication – Mai, Zhang -- 18. Joint Modeling of Multiple Skewed Longitudinal Processes with Excess of Zero and Time-to-Event: An Application to Fecundity Studies – Mirzaei, Kundu, Sundaram -- 19. Infectious Disease Epidemiology: Forecasting the Ongoing 2018-19 Ebola Epidemic in the Democratic Republic of Congo (DRC) Using Phenomenological Growth Models – Tariq, Chowell -- 20. Models and Estimation Methods for Item Factor Analysis: An Overview – Chen, Zhang.

Sommario/riassunto

This book brings together the voices of leading experts in the frontiers of biostatistics, biomedicine, and the health sciences to discuss the statistical procedures, useful methods, and novel applications in biostatistics research. It also includes discussions of potential future directions of biomedicine and new statistical developments for health research, with the intent of stimulating research and fostering the interactions of scholars across health research related disciplines. Topics covered include: Health data analysis and applications to EHR data Clinical trials, FDR, and applications in health science Big network analytics and its applications in GWAS Survival analysis and functional data analysis Graphical modelling in genomic studies The book will be valuable to data scientists and statisticians who are working in biomedicine and health, other practitioners in the health sciences, and graduate students and researchers in biostatistics and health.