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	Collana	Emerging Topics in Statistics and Biostatistics, , 2524-7743
	Disciplina	570.15195
	Soggetti	Biometry
		Quantitative research
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		Biostatistics
		Data Analysis and Big Data
		Data Mining and Knowledge Discovery
	Lingua di pubblicazione	Inglese
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	Note generali	Includes index.
	Nota di contenuto	Preface -- Part I: Next Generation Sequence Data Analysis -- 1. Modeling Species Specific Gene Expression Across Multiple Regions in the Brain -- 2. Classification of EEG Motion Artifact Signals Using Spatial ICA -- 3. Weighted K-means Clustering with Observation Weight for Single-cell Epigenomic Data -- 4. Discrete Multiple Testing in Detecting Differential Methylation Using Sequencing Data -- Part II: Deep Learning, Precision Medicine and Applications -- 5. Prediction of Functional Markers of Mass Cytometry Data via Deep Learning -- 6. Building Health Application Recommender System Using Partially Penalized Regression -- 7. Hierarchical Continuous Time Hidden Markov Model, with Application in Zero-Inflated Accelerometer Data -- Part III: Large Scale Data Analysis and its Applications -- 8. Privacy Preserving Feature Selection Via Voted Wrapper Method For Horizontally Distributed Medical Data -- 9. Improving Maize Trait through Modifying Combination of Genes -- 10. Molecular Basis of Food Classification in Traditional Chinese Medicine -- 11. Discovery Among Binary Biomarkers in Heterogeneous Populations -- Part IV: Biomedical

Research and the Modelling -- 12. Heat Kernel Smoothing on Manifolds and Its Application to Hyoid Bone Growth Modeling -- 13. Optimal Projections in the Distance-Based Statistical Methods -- 14. Kernel Tests for One, Two, and K-Sample Goodness-Of-Fit: State of the Art and Implementation Considerations -- 15. Hierarchical Modeling of the Effect of Pre-exposure Prophylaxis on HIV in the US -- 16. Mathematical Model of Mouse Ventricular Myocytes Overexpressing Adenylyl Cyclase Type 5 -- Part V: Survival Analysis with Complex Data Structure and its Applications -- 17. Non-Parametric Maximum Likelihood Estimator for Case-Cohort and Nested Case-Control Designs with Competing Risks Data -- Authors: Jie-Huei Wang, Chun-Hao Pan, Yi-Hau Chen and I-Shou Chang -- 18. Variable Selection in Partially Linear Proportional Hazards Model with Grouped Covariates and a Diverging Number of Parameters -- 19. Inference of Transition Probabilities in Multi-state Models using Adaptive Inverse Probability Censoring Weighting Technique.

Sommario/riassunto	This edited collection discusses the emerging topics in statistical modeling for biomedical research. Leading experts in the frontiers of biostatistics and biomedical research discuss the statistical procedures, useful methods, and their novel applications in biostatistics research. Interdisciplinary in scope, the volume as a whole reflects the latest advances in statistical modeling in biomedical research, identifies impactful new directions, and seeks to drive the field forward. It also fosters the interaction of scholars in the arena, offering great opportunities to stimulate further collaborations. This book will appeal to industry data scientists and statisticians, researchers, and graduate students in biostatistics and biomedical science. It covers topics in: Next generation sequence data analysis Deep learning, precision medicine, and their applications Large scale data analysis and its applications Biomedical research and modeling Survival analysis with complex data structure and its applications.