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Soggetti	Statistics Biostatistics Epidemiology Statistics for Life Sciences, Medicine, Health Sciences Statistical Theory and Methods
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Nota di contenuto	Existent Data Sources for Global Health and Epidemiology -- Satellite Imagery Data for Global Health and Epidemiology -- GIS/GPS-Assisted Probability Sampling in Resource-Limited Settings -- Construal-Level Theory Supported Methods for Sensitive Topics: Applications in Three Different Populations -- Integrative Data Analysis and Application in Global Health -- Introduction to Privacy-Preserving Data Collection and Sharing Methods for Global Health Research -- Geographic Mapping for Global Health Research -- A 4D-Indicator System of Count, P Rate, G Rate and PG Rate for Epidemiology and Global Health -- Historical Trends in Mortality Risk over a 100-Year Period in China with Recent Data-An Innovative Application of APC Modeling -- Moore-Penrose Generalized-Inverse Solution to APC Modeling for Historical Epidemiology and Global Health -- Mixed Effects Modeling of Multi-Site Data-Health Behaviors among Adolescents in Hong Kong, Macao, Taipei, Wuhan and Zhuhai -- Geographically Weighted Regression for Global Epidemiological Research -- Bayesian Spatial-Temporal Disease Modeling With Application to Malaria -- "Efficient Biosurveillance By A Statistical Process Control Chart Using Covariates" -- Cusp Catastrophe

Regression Analysis of Testosterone in Bifurcating the Age-Related Changes in PSA, a Biomarker for Prostate Cancer -- Logistic Cusp Catastrophe Regression for Binary Outcome: Method Development and Empirical Testing.

Sommario/riassunto

This book examines statistical methods and models used in the fields of global health and epidemiology. It includes methods such as innovative probability sampling, data harmonization and encryption, and advanced descriptive, analytical and monitory methods. Program codes using R are included as well as real data examples. Contemporary global health involves a myriad of medical and health challenges, including inequality of treatment, the HIV/AIDS epidemic and its subsequent control, the flu, tobacco control, drug use, and environmental pollution. In addition to its vast scales and telescopic perspective, addressing global health concerns often involves examining resource-limited populations with large geographic, socioeconomic diversities. Therefore, advancing global health requires new epidemiological design, new data, and new methods for sampling, data processing, and statistical analysis. This book provides global health researchers with methods that will enable access to and utilization of existing data. Featuring contributions from both epidemiological and biostatistical scholars, this book is a practical resource for researchers, practitioners, and students in solving global health problems in research, education, training, and consultation.
