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Altri autori (Persone)	OkhrinYarema OttoPhilipp
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Soggetti	Statistics Environmental sciences - Mathematics Statistical Theory and Methods Statistics in Engineering, Physics, Computer Science, Chemistry and Earth Sciences Statistics in Business, Management, Economics, Finance, Insurance Mathematical Applications in Environmental Science Estadística matemàtica Processament de dades Llibres electrònics
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Nota di contenuto	- Part I Statistical Process Monitoring -- More On the Quasi-Stationary Distribution of the Shiryaev–Roberts Diffusion -- CUSUM schemes for stationary and nonstationary Gaussian processes -- Distribution-Free Multivariate Phase I Shewhart Control Charts: Analysis, Comparisons and Recommendations -- Quick Detection Updating Variable Life-Adjusted Display -- Monitoring complex segmented streams of data using bootstrap control charts -- Some Stylized Facts of the Conditional Expected Delay (CED) -- Stochastic Ordering in the Performance Analysis of Control Charts for Binomial AR(1) Processes -- An Integrated Approach for Designing a Phase I C-Control Chart Based on the Phase II Performance of Poisson Exponentially Weighted Moving

Average Control Chart -- Control Charts for Poisson Counts based on the Stein–Chen Identity -- Misguided Statistical Process Monitoring Approaches -- Part II Statistics in Finance -- The Empirical Similarity Approach for Combining Predictions of Portfolio Weights -- Linear Shrinkage-Based Hypothesis Test for Large Dimensional Covariance Matrix -- Estimation of Optimal Portfolio Compositions for Small Sample and Singular Covariance Matrix -- Shrinkage Estimation of the Intercept Parameter in Linear Regression -- Intergenerational social mobility in the United States: a multivariate analysis using distributional regression -- Can we give the Maximum Sharpe Ratio Portfolio a Chance? -- On Extreme Value Asymptotics of Projected Sample Covariances in High Dimensions with Applications in Finance and Convolutional Networks -- Part III Environmetrics and Spatial Statistics -- A Bivariate Spatiotemporal Analysis of Breast Cancer and Lung Cancer Mortality and Incidence in the United States -- To what extent airborne particulate matters are influenced by ammonia and nitrogen oxides? -- A deep-learning approach for reducing the probability of false alarms in smartphone-based earthquake early warning systems -- When things get extreme: Records and crashes -- Spatial autoregressive fractionally integrated moving average model -- A path in regression Random Forest looking for spatial dependence: a taxonomy and a systematic review -- On the estimation of smooth maps from regional aggregates via measurement error models: A review.

Sommario/riassunto

This book presents a unique collection of contributions on modern methods and applications in three key areas of statistics, celebrating the significant work of Wolfgang Schmid in this field. It is structured thematically into parts focusing on statistical process monitoring, financial statistics, and spatial statistics with environmetrics, each featuring chapters from leading experts. The opening articles on statistical process monitoring present novel methodologies for the detection of anomalies and control charting techniques, which are crucial for maintaining quality in manufacturing processes. Detailed discussions are included on integrating multivariate statistical methods and real-time monitoring to enhance process reliability and efficiency. The part on financial statistics explores rigorous approaches in financial econometrics, with an emphasis on dynamic modelling of market volatility and risk assessment. Contributions cover advanced asset allocation strategies, leveraging high-dimensional data analysis, and the application of machine learning techniques. Spatial statistics and environmetrics are addressed through innovative research on the statistical analysis of environmental data. This includes the use of geostatistical models and hybrid models that combine traditional statistical techniques with machine learning to improve the prediction of environmental phenomena. Key topics here involve the modelling of extremes and airborne pollutants, the prediction of earthquakes using a smartphone-based sensor network, and reviews of selected topics essential in modern spatial statistics. Each part not only reflects Wolfgang Schmid's interests and impact in these areas but also provides detailed theoretical and applied studies, demonstrating how these sophisticated statistical methods can be effectively employed in practical scenarios. This makes the book an indispensable resource for researchers and practitioners looking to apply cutting-edge statistical techniques in these complex fields.
