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Component Analysis; 6.4 Wavelets; References
7 Multivariate Linear Profiles Monitoring Introduction; 7.1 Monitoring Multivariate Simple Linear Profiles; 7.2 Monitoring Multivariate Multiple Linear Profiles; References; 8 Statistical Process Control for Geometric Specifications; Introduction; 8.1 Examples of Geometric Feature Concerning Circularity; 8.2 Control Charts for Profile Monitoring; 8.3 Simple Approaches for Monitoring Manufactured Profiles: The Industrial Practice; 8.4 Performance Comparison; 8.5 Moving from 2D Profiles to 3D Surfaces; 8.6 Concluding Remarks; Acknowledgments; References
9 Correlation and Autocorrelation in Profiles Introduction; 9.1 Methods for WPA for Linear Models; 9.2 Methods for BPC for Linear Models; 9.3 Methods for WPA and BPC for Other (Nonlinear) Models; 9.4 Phase I Analysis; 9.5 Phase II Analysis; 9.6 Related Issues: Rational Subgrouping and Random Effects; 9.7 Discussion and Open Questions; Acknowledgment; References; 10 Nonparametric Profile Monitoring; Introduction; 10.1 Monitoring Profiles Based on Nonparametric Regression; 10.2 Nonparametric Profile Monitoring Using Change-Point Formulation and Adaptive Smoothing
10.3 Nonparametric Profile Monitoring by Mixed-Effects Modeling Appendix A: Approximate the Distributions of Quadratic Forms Like $z^T A z$; Appendix B: The Expression of $l_{r,k}$ in Model (10.8); References; Index

Sommario/riassunto

A one-of-a-kind presentation of the major achievements in statistical profile monitoring methods. Statistical profile monitoring is an area of statistical quality control that is growing in significance for researchers and practitioners, specifically because of its range of applicability across various service and manufacturing settings. Comprised of contributions from renowned academicians and practitioners in the field, Statistical Analysis of Profile Monitoring presents the latest state-of-the-art research on the use of control charts to monitor process and product quality.
