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3.5.2 Application: Nearest-Neighbor Prototypes3.6 Sphere-of-Influence Graphs; 3.7 Sphere-of-Attraction Graphs; 3.8 Other Relatives; 3.9 Asymptotics; 3.10 Further Reading; 4 Class Cover Catch Digraphs; 4.1 Catch Digraphs; 4.1.1 Sphere Digraphs; 4.2 Class Covers; 4.2.1 Basic Definitions; 4.3 Dominating sets; 4.4 Distributional Results for Cn,m-graphs; 4.4.1 Univariate Case; 4.4.2 Multivariate CCCDs; 4.5 Characterizations; 4.6 Scale Dimension; 4.6.1 Application: Latent Class Discovery; 4.7 (a,b) Graphs; 4.8 CCCD Classification; 4.9 Homogeneous CCCDs; 4.10 Vector Quantization
4.11 Random Walk Version4.11.1 Application: Face Detection; 4.12 Further Reading; 5 Cluster Catch Digraphs; 5.1 Basic Definitions; 5.2 Dominating Sets; 5.3 Connected Components; 5.4 Variable Metric Clustering; 6 Computational Methods; 6.1 Introduction; 6.2 Kd- Trees; 6.2.1 Data Structure; 6.2.2 Building the Tree; 6.2.3 Searching the Tree; 6.3 Class Cover Catch Digraphs; 6.4 Cluster Catch Digraphs; 6.5 Voronoi Regions and Delaunay Triangularizations; 6.6 Further Reading; References; Author Index; Subject Index

Sommario/riassunto

A timely convergence of two widely used disciplines Random Graphs for Statistical Pattern Recognition is the first book to address the topic of random graphs as it applies to statistical pattern recognition. Both topics are of vital interest to researchers in various mathematical and statistical fields and have never before been treated together in one book. The use of data random graphs in pattern recognition in clustering and classification is discussed, and the applications for both disciplines are enhanced with new tools for the statistical pattern recognition community. New and i