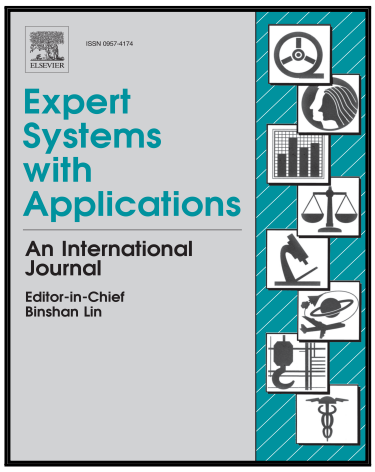

Manifold Learning Techniques for Unsupervised Anomaly Detection

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Highlights

- Manifold learning techniques are used to construct improved image background models.
- Random uniform sampling of disjoint image neighborhoods yields background sample.
- Detection statistic is distance of remaining neighborhoods from background manifold.
- Performance versus parameters like kernel bandwidth and sampling density is tested.
- Kernel PCA beats diffusion map and benchmark RX on maritime anomaly detection task.