OrthoReduce Performance Dashboard
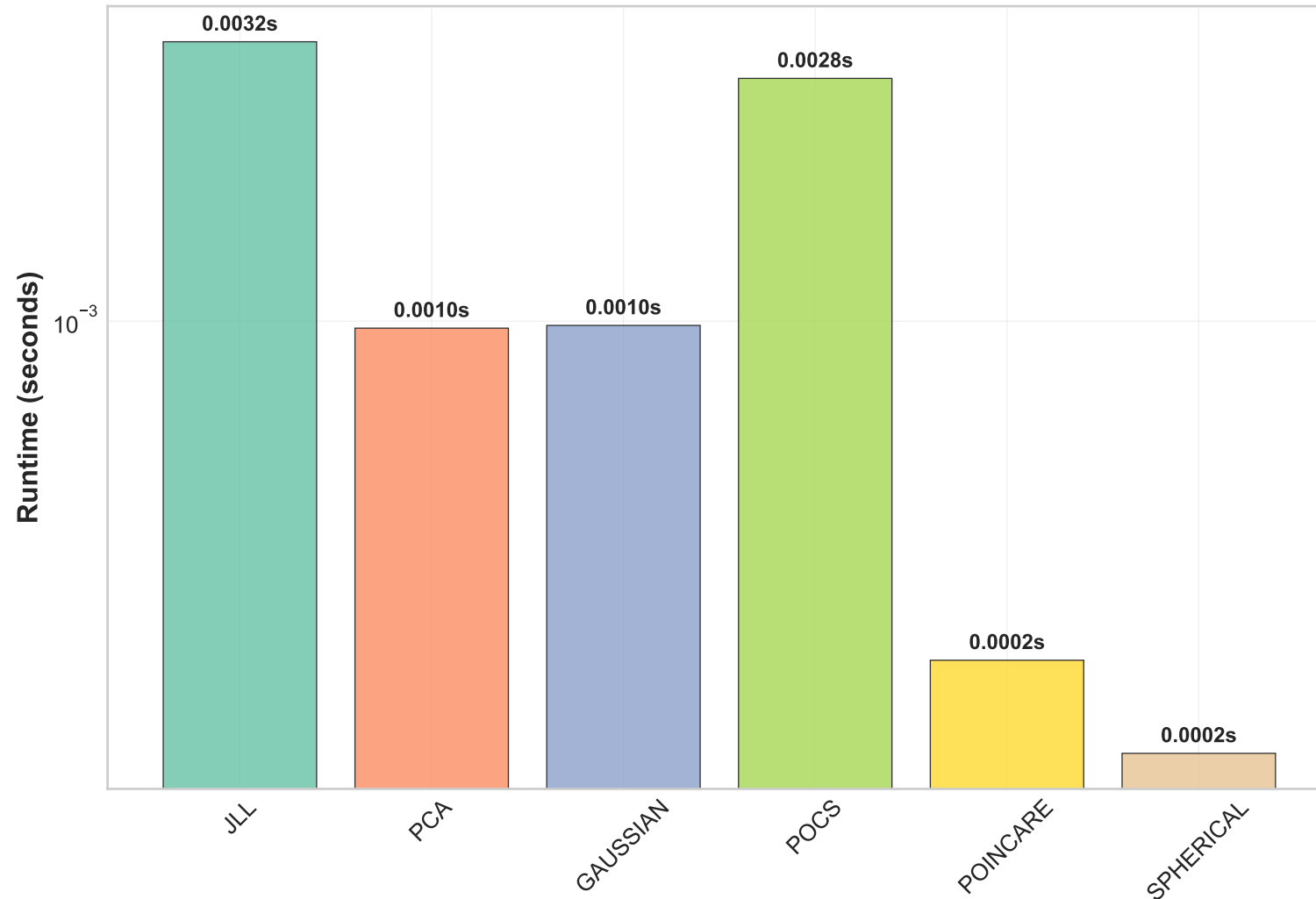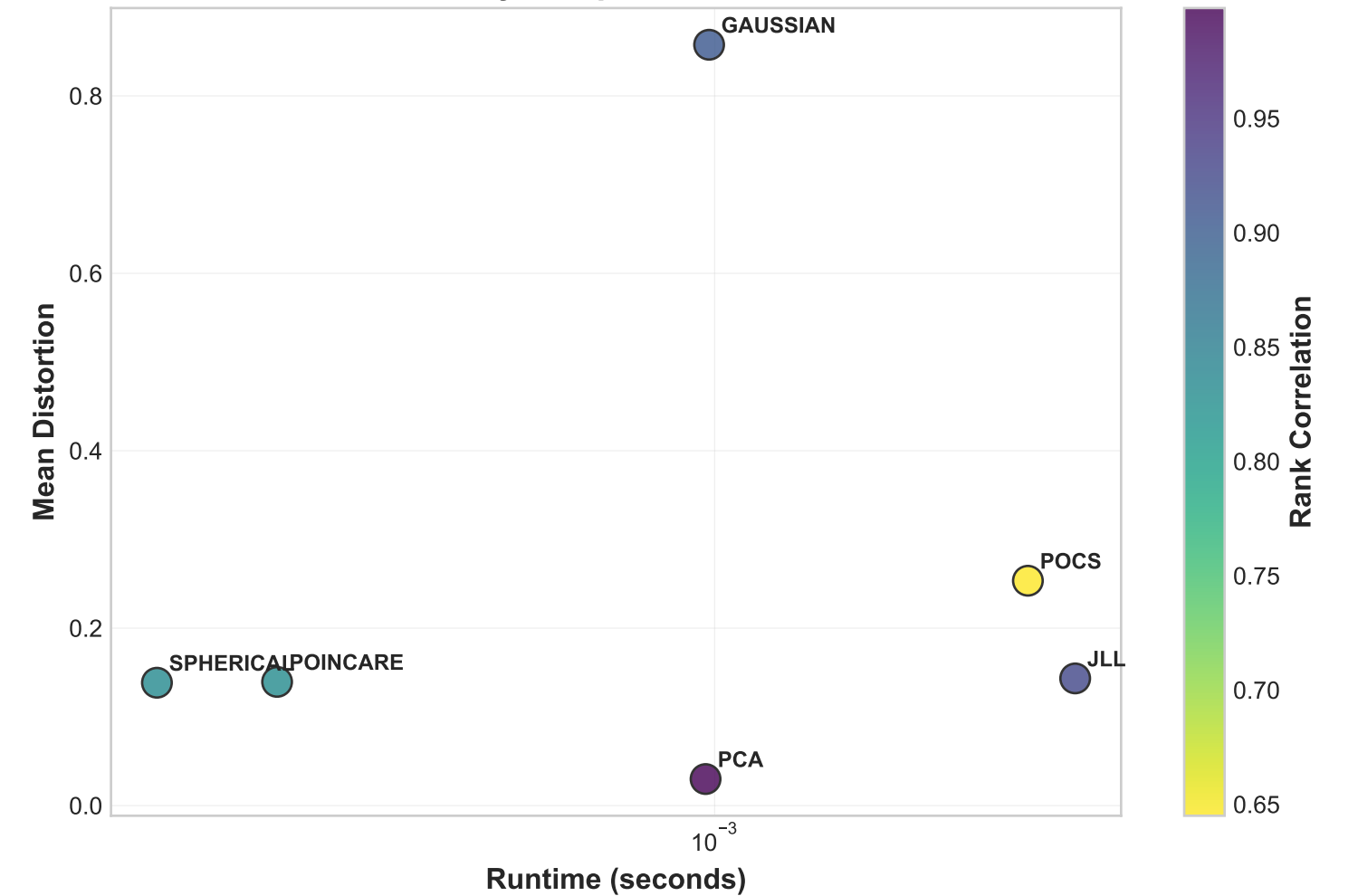
Runtime Performance (Log Scale)

- JLL: 0.0032s
- PCA: 0.0010s
- GAUSSIAN: 0.0010s
- POCS: 0.0028s
- POINCARE: 0.0002s
- SPHERICAL: 0.0002s

Compression Effectiveness

- JLL: 1.2x
- PCA: 1.2x
- GAUSSIAN: 1.2x
- POCS: 1.2x
- POINCARE: 1.2x
- SPHERICAL: 1.2x
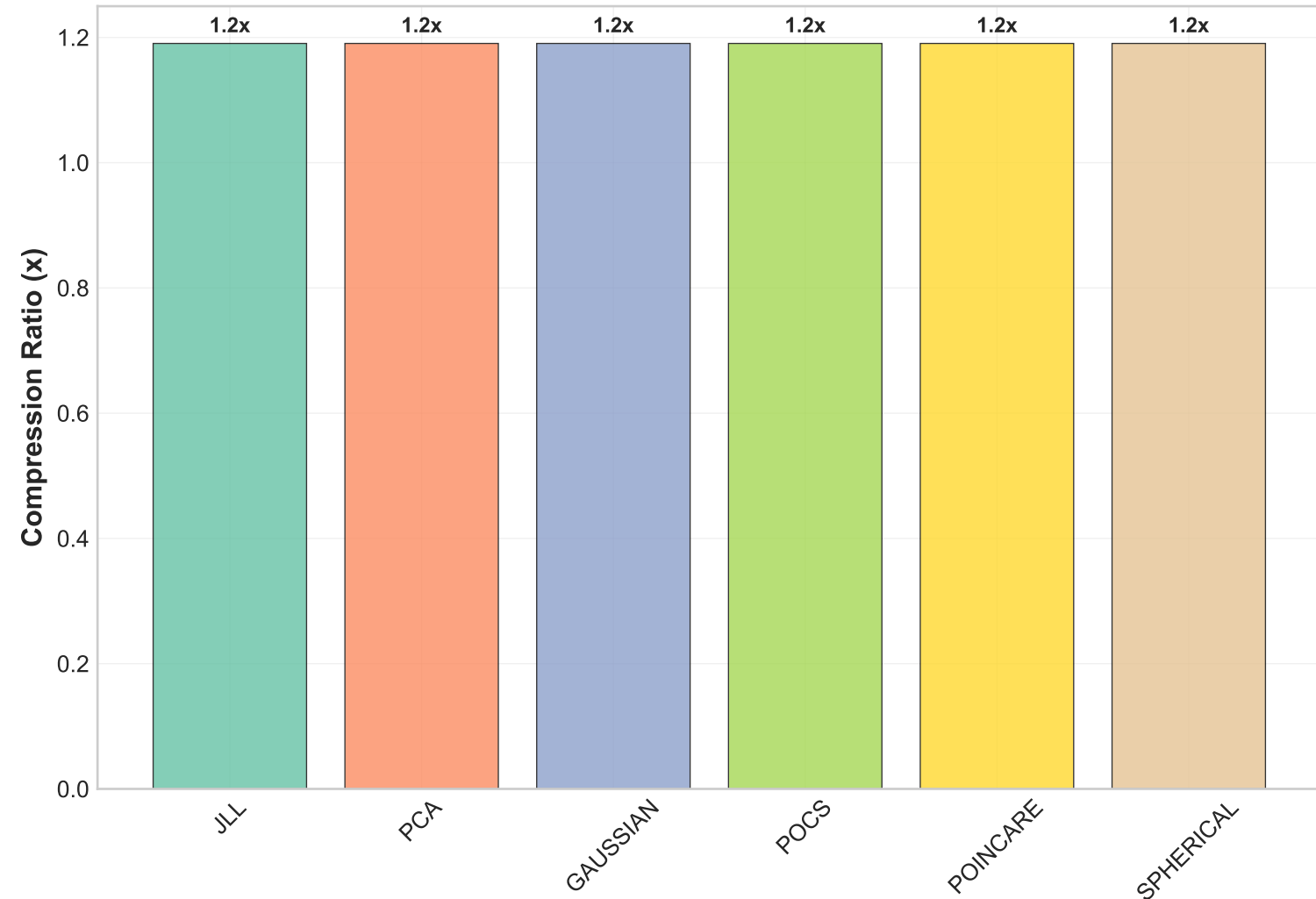
Quality vs Speed Trade-off

Rank Correlation

Overall Quality Assessment

Quality Score (Correlation/Distortion)
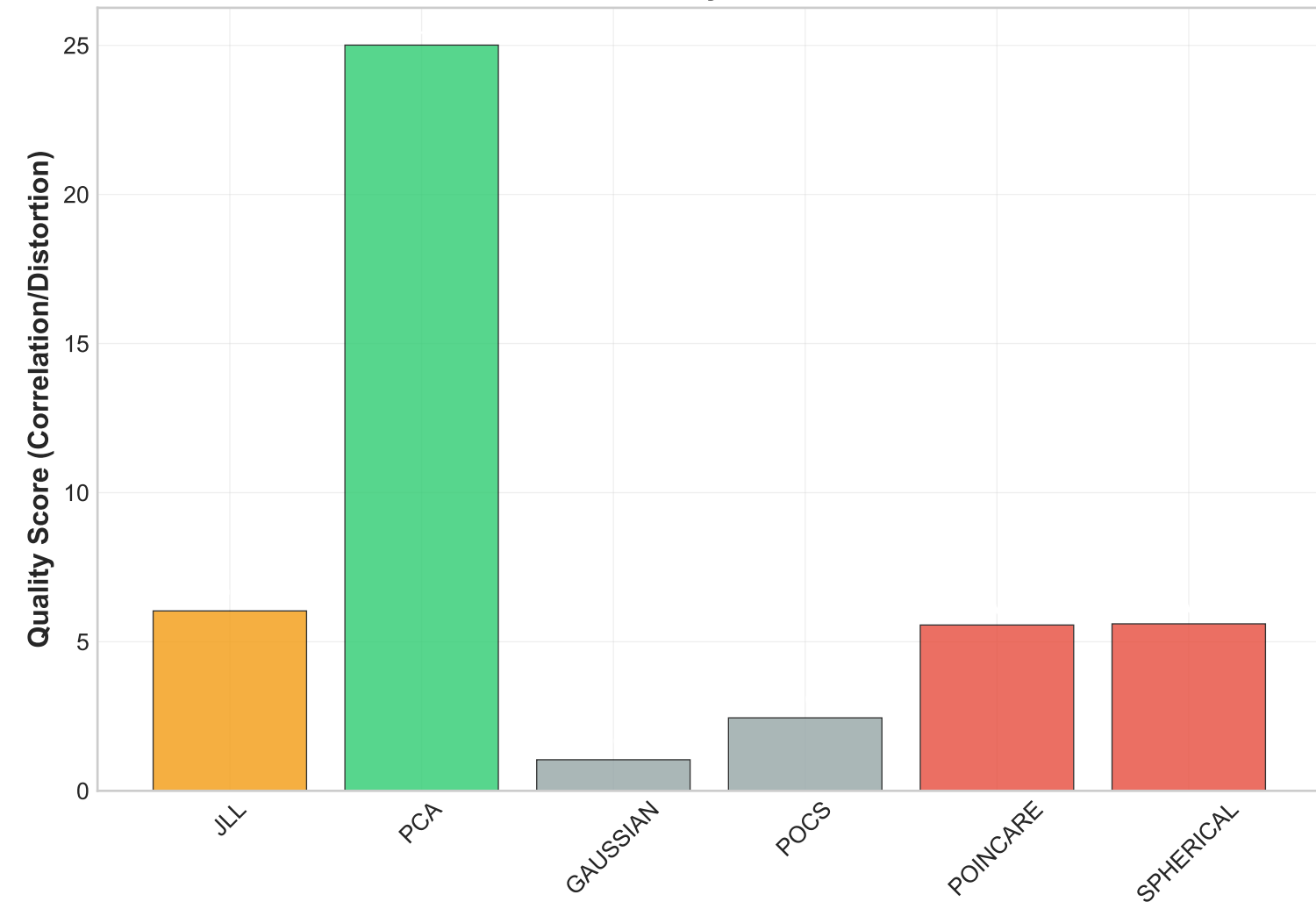
Method Comparison Analysis

Quality Analysis: Distortion vs Correlation

Multi-Metric Performance Radar
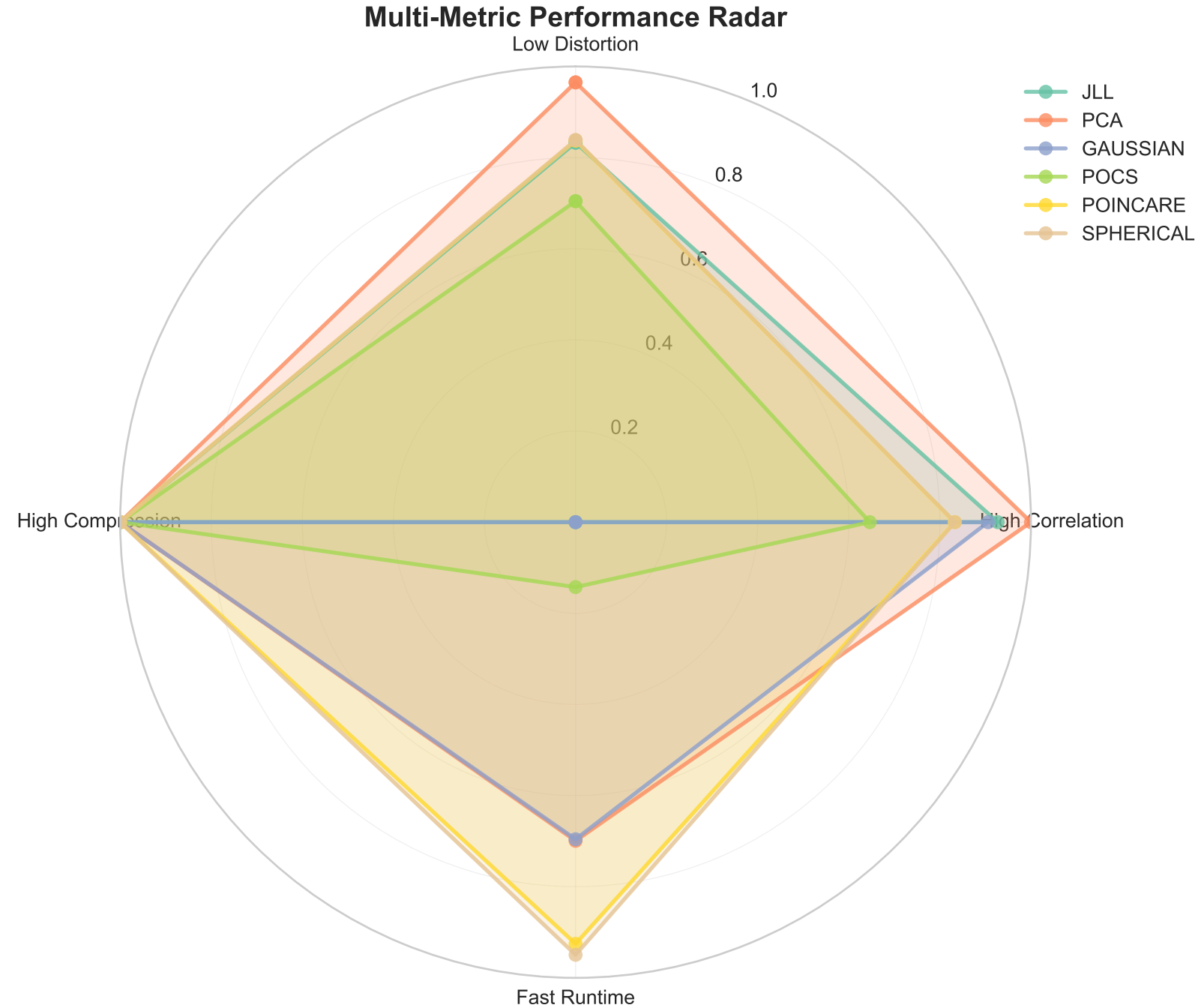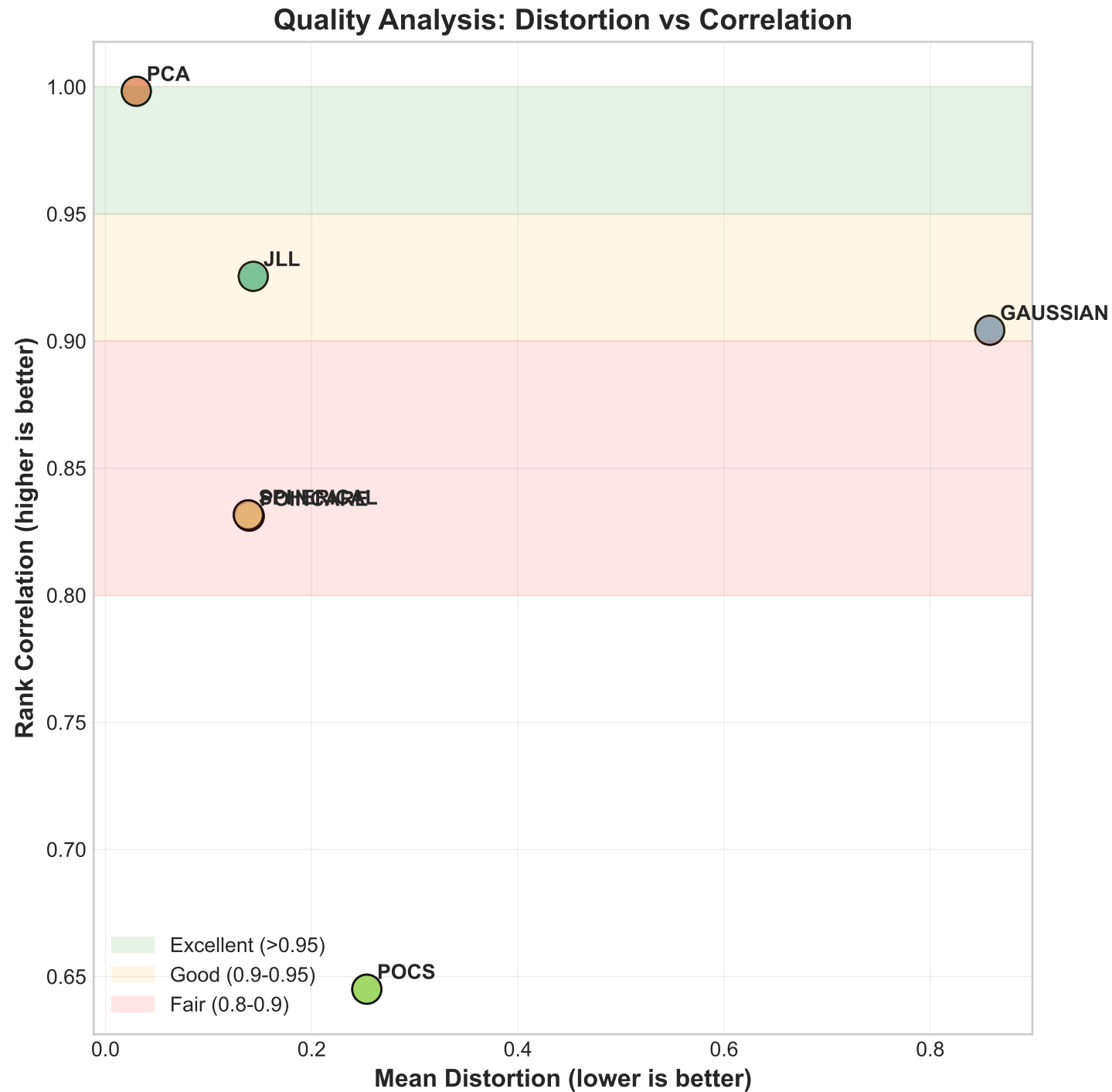
Detailed Results Summary

Method	Runtime	Compression	Mean Distortion	Max Distortion	Rank Correlation	Quality Grade
PCA	0.0010s	1.19x	0.0299	0.4233	0.9983	EXCELLENT
JLL	0.0032s	1.19x	0.1434	0.5186	0.9255	GOOD
GAUSSIAN	0.0010s	1.19x	0.8577	2.2106	0.9043	POOR
SPHERICAL	0.0002s	1.19x	0.1385	1.0135	0.8317	FAIR
POINCARE	0.0002s	1.19x	0.1394	0.8781	0.8311	FAIR
POCS	0.0028s	1.19x	0.2535	2.0226	0.6450	POOR

Experiment Configuration:
Dataset: 500 points, 50 dimensions → 42 dimensions
Compression: 1.19x reduction
Epsilon: 0.2
Intrinsic Dimension: 35
Optimization: Adaptive