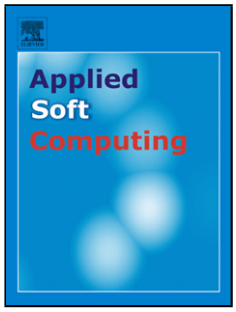

Title: Evolutionary Multi-Objective Optimization Assisted by Metamodels, Kernel PCA and Multi-Criteria Decision Making Techniques withApplications in Aerodynamics

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Highlights

- Kernel Principal Component Analysis (KPCA) assists Evolutionary Optimization.
- Thanks to KPCA, an equivalent, more separable optimization problem is solved.
- KPCA reduces the sensory inputs used to train the metamodels.
- Multi-Criteria Decision-Making schemes incorporated into EAs with metamodels.
- Method validation in two expensive aerodynamic shape optimizations.