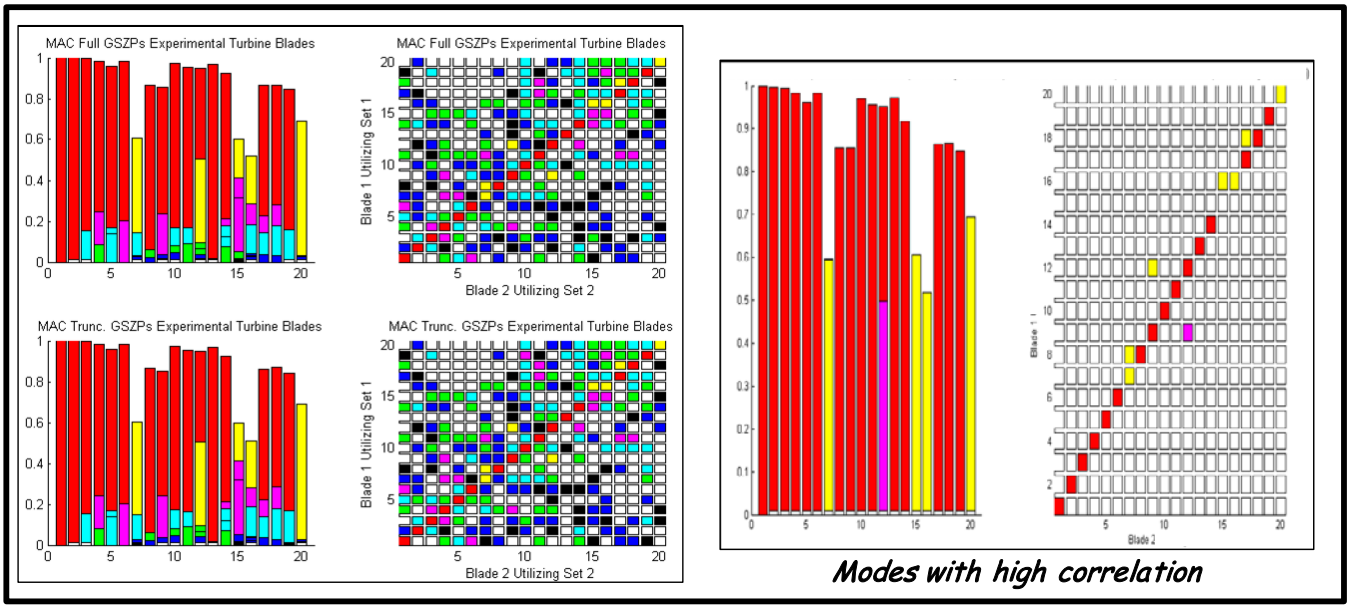
Vector Correlation using Zernike Polynomials



Vector correlation for large vector sets, common with optical measurements, presents new challenges. The decomposition of the shapes using Zernike Polynomials results in a very small set of polynomial terms describing each shape.

The MAC of those for two different blades shows improved correlation. Only 270 polynomial terms used rather than the 158,000+ points from shape. Small geometric differences in the physical geometry which presents correlation problems is overcome with this approach

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