

Some random projection based hypothesis tests.

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Abstract *We propose two new non parametric tests based on continuous one-dimensional random projections. The first one deals with central symmetry and the second one with independence. These tests are implemented for finite and infinite dimensional (functional) data sets. Both tests are distribution free and universally consistent. We also propose different techniques to improve the power of the tests. Promising results are obtained comparing the new tests with existing ones through a simulation study. We develop an application with real data in Banach Spaces.*

keywords Random projections, central symmetry, independence tests, universal consistency.