

Distance Correlation Report

Variables:

X = G1

Y = G3

Result:

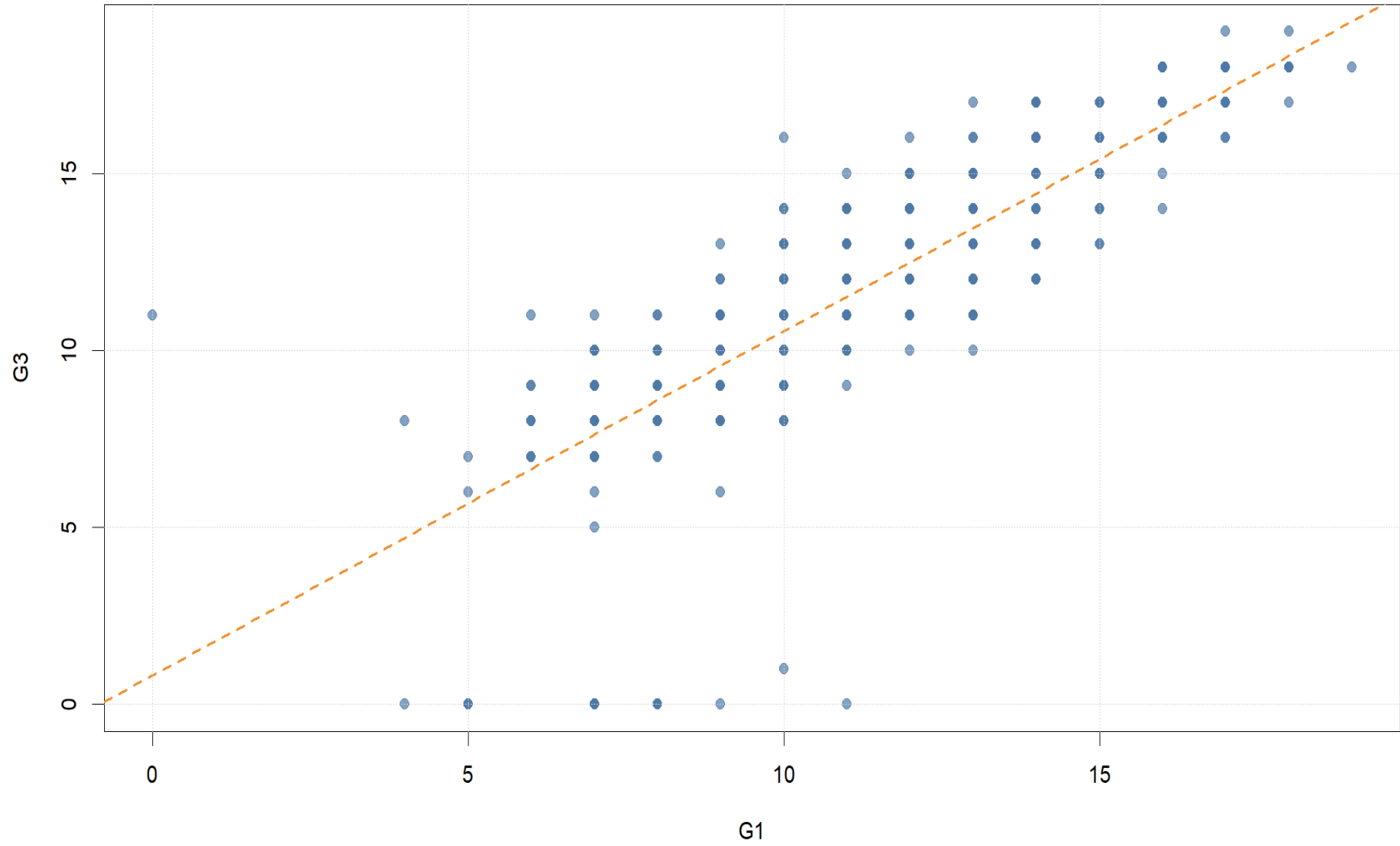
test_name	x_variable	y_variable	n	distance_correlation	distance_correlation_permutation_p_value
Distance Correlation	G1	G3	649	0.8478859	0.001
distance_covariance_squared					
	2.425715		3.17072		3.590641 0.8263871 1.617571e-163
spearman_rho	spearman_p_value	kendall_tau	kendall_p_value	n_permutations	alpha decision_alpha_0_05
0.8832876	4.987375e-215	0.7661978	2.108694e-155	999	0.05 Reject independence

Descriptive statistics:

variable	n	mean	median	standard_deviation	variance	minimum	maximum
G1	649	11.39908	11	2.745265	7.536481	0	19
G3	649	11.90601	12	3.230656	10.437140	0	19

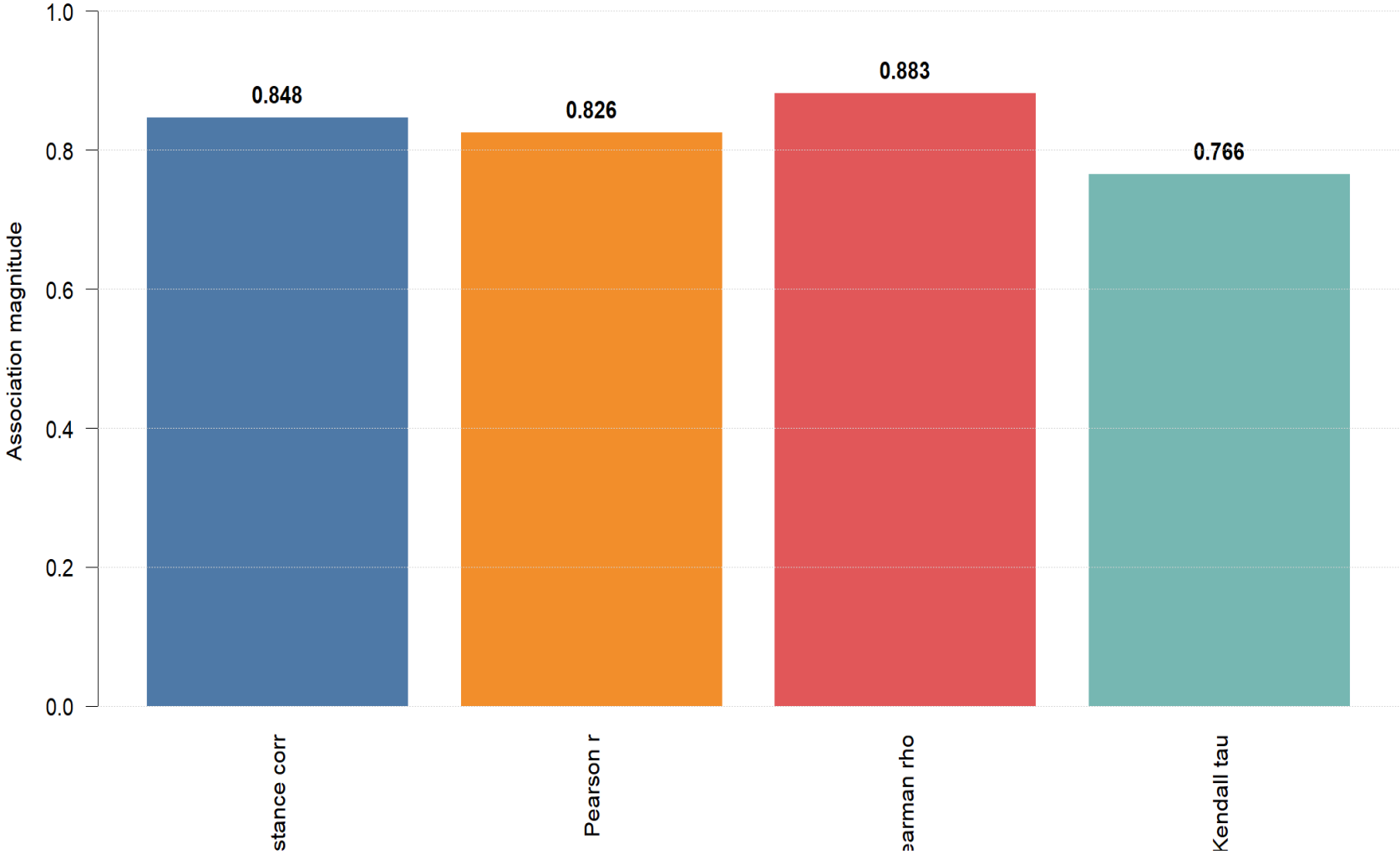
Distance Correlation: Scatter Plot

dCor = 0.848; permutation p = 0.001.



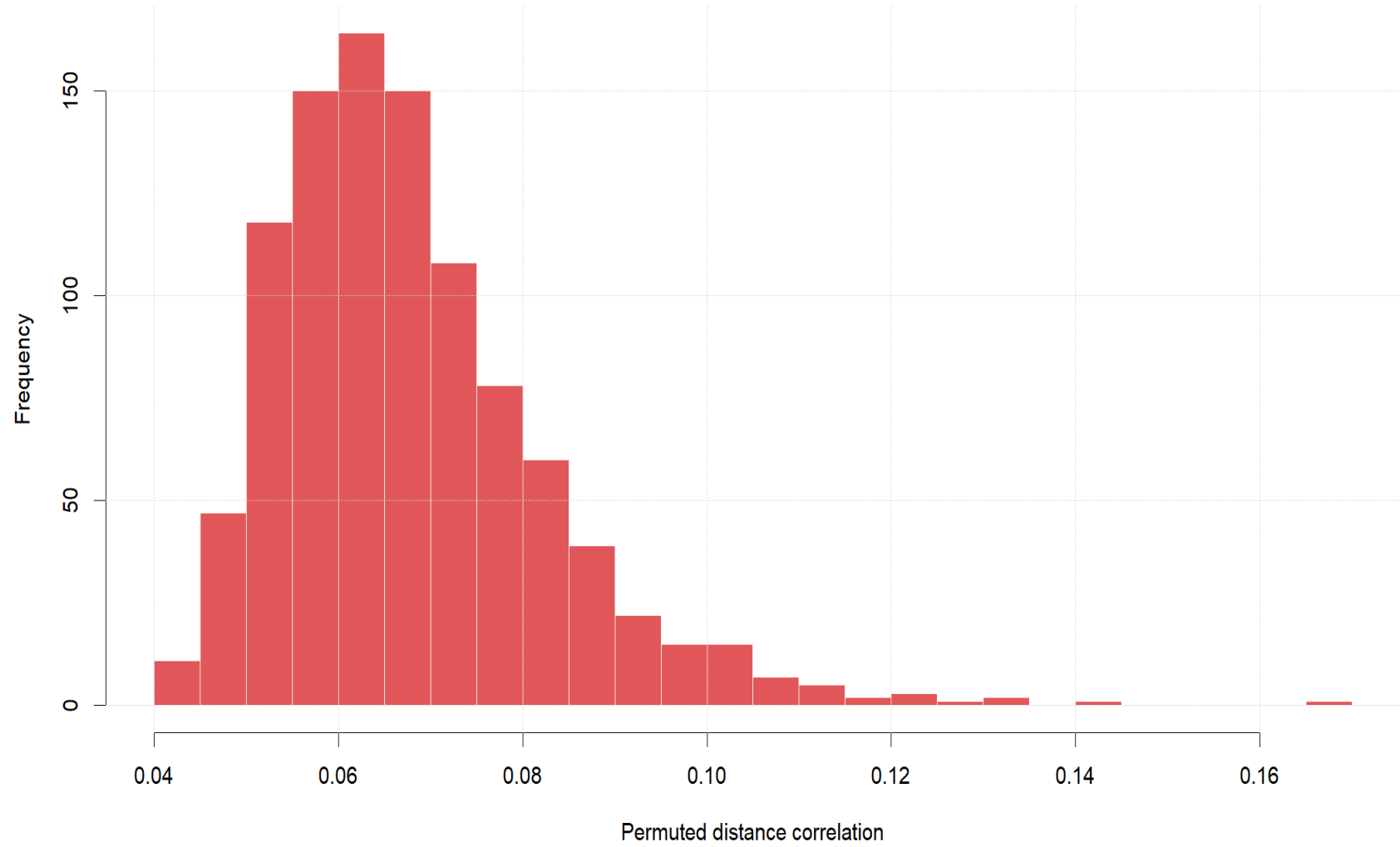
Association Measure Comparison

Distance correlation can capture nonlinear dependence.



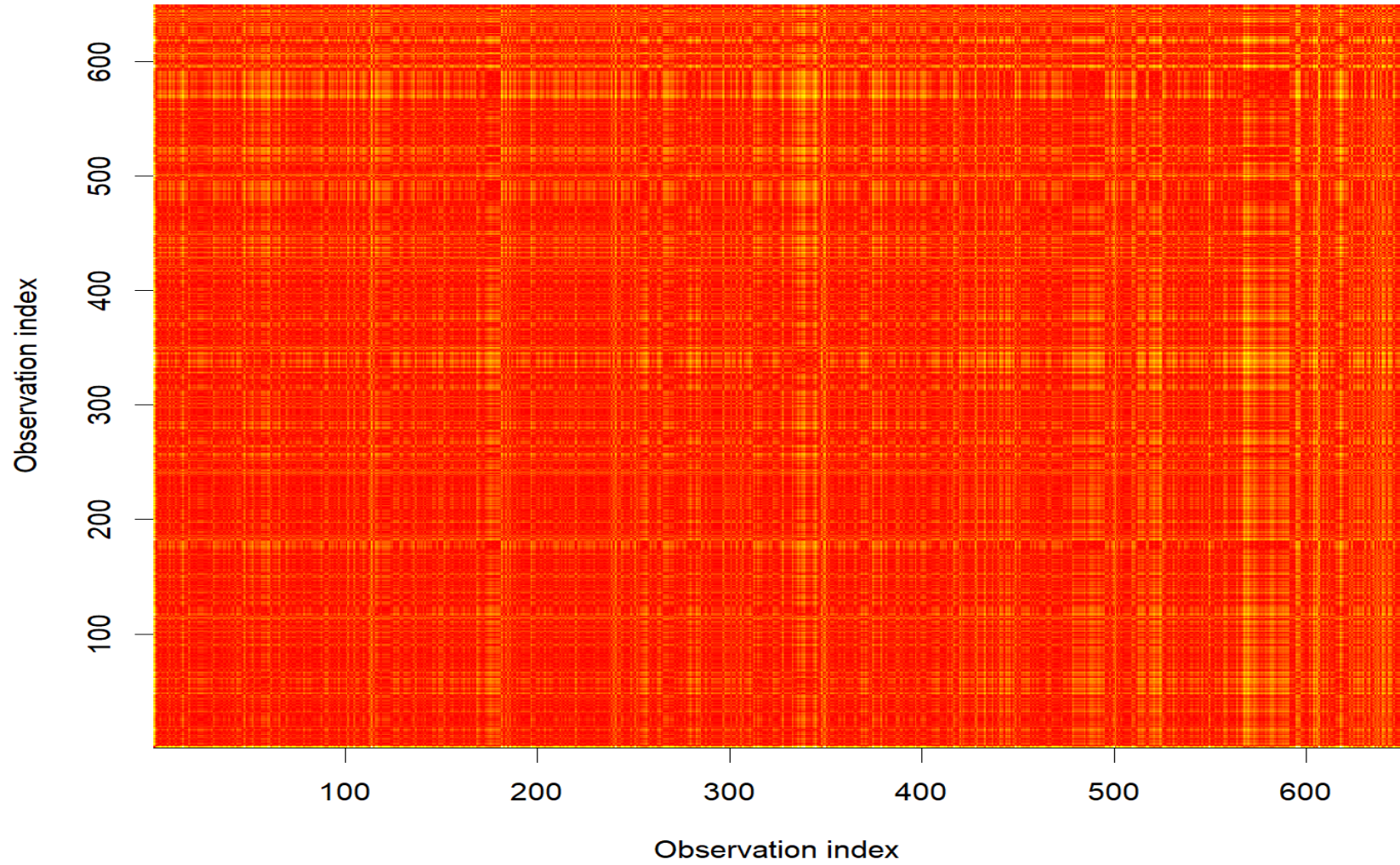
Distance Correlation Permutation Test

P-value is based on permuted Y values.



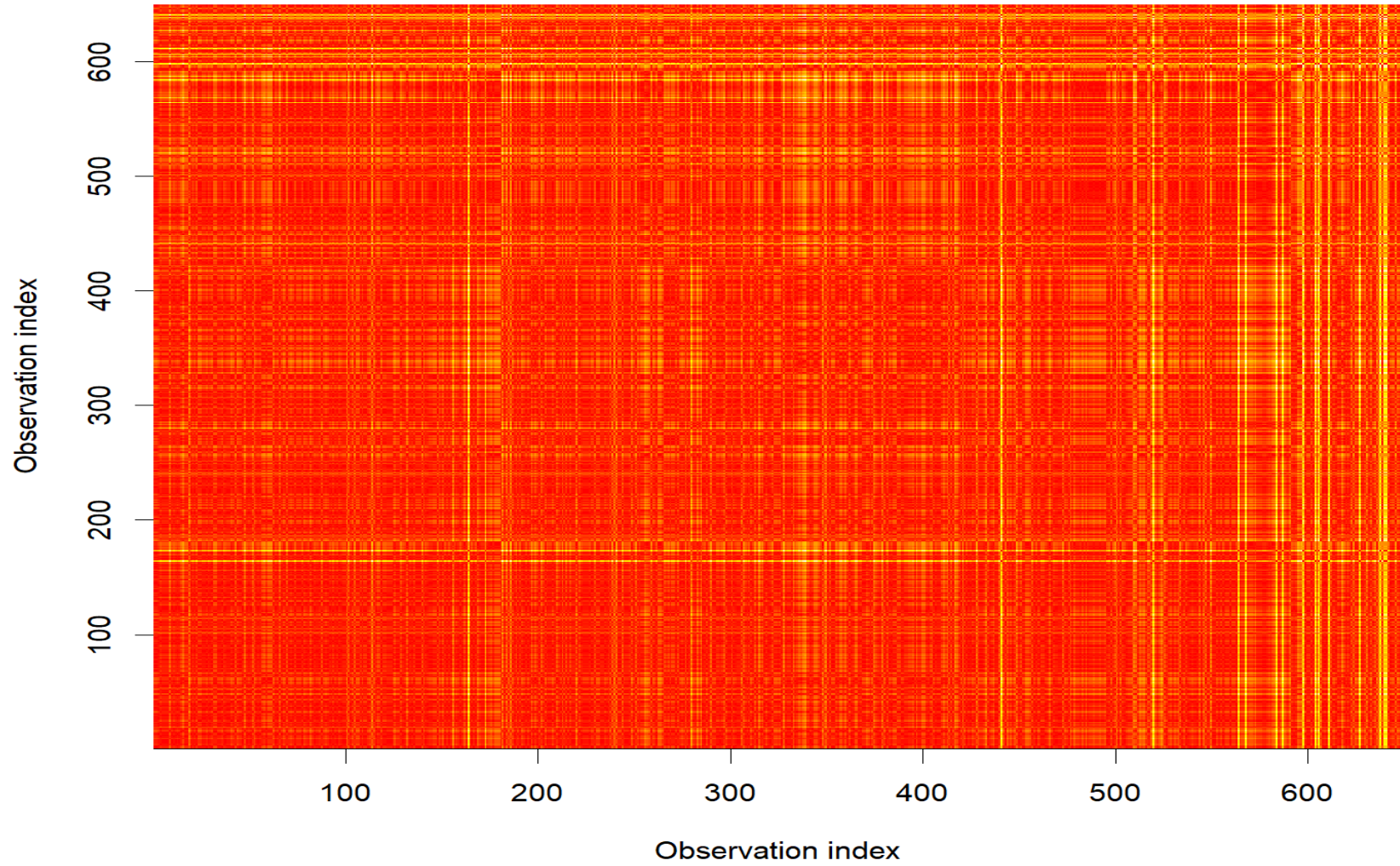
Pairwise Distance Matrix: G1

Distance correlation is computed from pairwise distances.



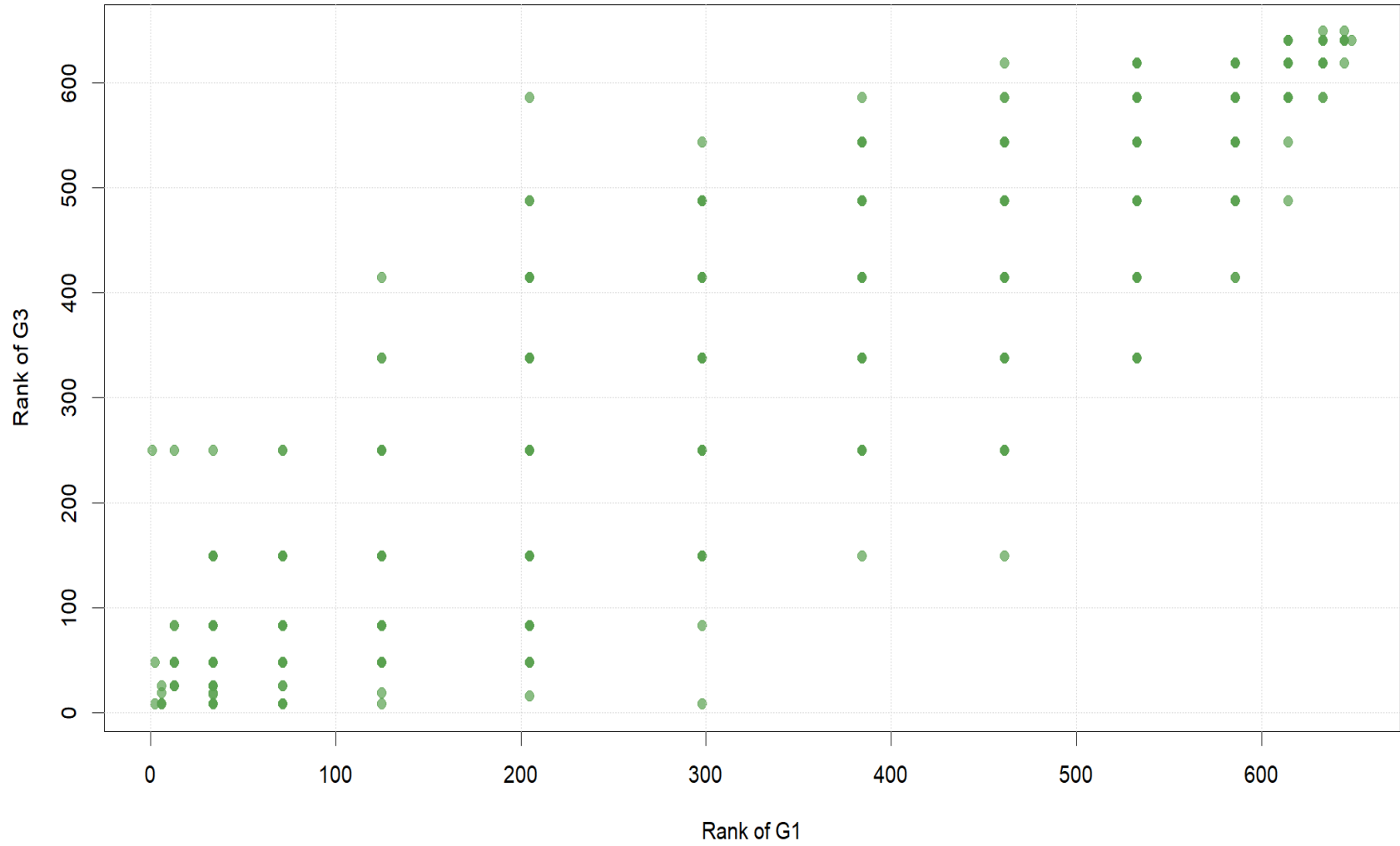
Pairwise Distance Matrix: G3

Distance correlation is computed from pairwise distances.



Rank-Scale View

Rank scatter supports comparison with Spearman correlation.



Correlation Test p-value Summary

Distance correlation uses a permutation p-value.

Kendall 2.109e-155

Spearman 4.987e-215

Pearson 1.618e-163

Distance corr 0.001

0.00 0.01 0.02 0.03 0.04 0.05 0.06

p-value

