A Cluster-Based Outlier Detection Scheme for Multivariate Data

Supplemental Tables

$p = 1$	$c^2_{n,p} = 0.8045 + 9521.38\, n^{-2.7647}$
$p = 3$	$c^2_{n,p} = 0.6835 + \quad 23.57\, n^{-0.8718}$
$p = 5$	$c^2_{n,p} = 0.7532 + \quad 37.51\, n^{-0.9834}$
$p = 10$	$c^2_{n,p} = 1.3627 + 8096.03\, n^{-2.0556}$
$p = 15$	$c^2_{n,p} = 1.7921 + \quad 869.70\, n^{-1.3223}$

Table 1: Scaling factor $c^2_{n,p}$.

	$n = 40$	$n = 60$	$n = 90$	$n = 125$	$n = 200$	$n = 400$
$p = 5$	1.0305	1.0407	1.0505	1.0533	1.0622	1.0760
$p = 10$	1.0067	1.0168	1.0328	1.0609	1.0742	1.0609
$p = 15$	1.0072	1.0065	1.0141	1.0188	1.0339	1.0546

Table 2: Estimated bias correction factor $c_{\text{FSRMCD}-\text{MAC}}$.

	Test	$n = 40$	$n = 60$	$n = 90$	$n = 125$	$n = 200$	$n = 400$
$p = 5$	$L_{1,1-\gamma}$	38.0688	33.8628	32.2079	31.6375	31.9250	34.0813
	$L_{2,1-\gamma}$	12.6183	18.1691	17.2121	16.9202	16.9710	16.7308
$p = 10$	$L_{1,1-\gamma}$	57.4584	50.6179	49.3184	49.2372	46.3510	45.4414
	$L_{2,1-\gamma}$	16.3012	18.9328	28.1964	28.3989	26.9379	25.9930
$p = 15$	$L_{1,1-\gamma}$	91.2651	73.6918	66.0155	59.7126	57.2154	56.4280
	$L_{2,1-\gamma}$	20.2242	24.3280	27.5406	37.2353	34.7012	34.0299

Table 3: $L_{1,1-\gamma_{\text{actual}}}$, $L_{2,1-\gamma_{\text{actual}}}$ for FSRMCD-MAC when $\gamma_{\text{nominal}} = 0.01$ for IRMCD.

		$n = 40$	$n = 60$	$n = 90$	$n = 125$	$n = 200$	$n = 400$
$p = 5$	$\text{mult}_{\text{IRMCD}}$	0.5765	0.2807	0.2248	0.2015	0.1569	0.1778
	$\text{mult}_{\text{FSRMCD}-\text{MAC}}$	0.6554	0.3381	0.3255	0.3377	0.2952	0.3926
$p = 10$	$\text{mult}_{\text{IRMCD}}$	2.4551	0.8678	0.6979	0.6456	0.5820	0.2783
	$\text{mult}_{\text{FSRMCD}-\text{MAC}}$	4.7270	1.1209	0.9817	1.0011	1.1025	0.7860
$p = 15$	$\text{mult}_{\text{IRMCD}}$	2.5548	2.0139	1.0635	1.4505	1.2822	0.9517
	$\text{mult}_{\text{FSRMCD}-\text{MAC}}$	4.3466	3.3069	1.7381	1.8549	2.2975	3.9149

Table 4: Critical mult values.