

The graph displays the performance of three methods (GMM, EM, GEM) across different cluster sizes (5 to 10). The y-axis represents a metric ranging from 0.0 to 1.0. The x-axis represents the cluster size.

Legend:

- Blue lines:** GMM (solid), EM (dashed), GEM (dotted)
- Red lines:** GMM (solid), EM (dashed), GEM (dotted)
- Green lines:** GMM (solid), EM (dashed), GEM (dotted)

Approximate data values extracted from the graph:

Clustersize	Blue GMM	Blue EM	Blue GEM	Red GMM	Red EM	Red GEM	Green GMM	Green EM	Green GEM
5	0.85	0.95	0.80	0.65	0.70	0.55	0.60	0.65	0.50
6	0.75	0.85	0.70	0.60	0.65	0.50	0.65	0.70	0.50
7	0.65	0.75	0.60	0.55	0.60	0.45	0.70	0.75	0.50
8	0.55	0.65	0.50	0.50	0.55	0.40	0.75	0.80	0.50
9	0.45	0.55	0.40	0.45	0.50	0.35	0.80	0.85	0.50
10	0.35	0.45	0.30	0.40	0.45	0.30	0.85	0.90	0.50

The graph displays the Type-I error rate for three statistical procedures: ANOVA, MCTP, and Wald, across different cluster sizes (5 to 10). The y-axis represents the Type-I error, ranging from 0.15 to 0.35. The x-axis represents the cluster size, ranging from 5 to 10. The legend indicates that solid lines represent ANOVA, dashed lines represent MCTP, and dash-dot lines represent Wald.

Procedure	Cluster size 5	Cluster size 6	Cluster size 7	Cluster size 8	Cluster size 9	Cluster size 10
ANOVA (Solid)	0.27	0.26	0.25	0.24	0.23	0.22
MCTP (Dashed)	0.32	0.30	0.29	0.28	0.27	0.25
Wald (Dash-dot)	0.35	0.30	0.28	0.27	0.26	0.24

The graph displays the performance of three methods (GMM, EM, GEM) across different cluster sizes (5 to 10). The y-axis represents a metric ranging from 0 to 100. For each method, two lines are plotted: a solid line and a dashed line. The solid lines generally show a slight downward trend as cluster size increases, while the dashed lines show more variability, with GMM's dashed line increasing sharply at cluster size 10 and GEM's dashed line decreasing sharply.

Clustersize	GMM (Solid)	GMM (Dashed)	EM (Solid)	EM (Dashed)	GEM (Solid)	GEM (Dashed)
5	~45	~55	~35	~45	~25	~35
6	~48	~52	~34	~44	~24	~34
7	~50	~51	~33	~43	~23	~33
8	~52	~50	~32	~42	~22	~32
9	~54	~49	~31	~41	~21	~31
10	~56	~65	~30	~40	~20	~25

The graph displays the Type-I error rate as a function of the number of clusters (5 to 10) for three different sample sizes: 12 (red), 15 (green), and 20 (blue). Solid lines represent the mean error, while dashed lines of the same color represent the confidence interval. For sample size 12, the error is stable around 0.23. For sample size 15, the error increases from 0.20 to 0.27. For sample size 20, the error increases from 0.22 to 0.24. The confidence intervals are wider for smaller sample sizes and narrower for larger sample sizes.

Clustersize	Sample Size 12 (Mean Error)	Sample Size 15 (Mean Error)	Sample Size 20 (Mean Error)
5	0.23	0.20	0.22
6	0.23	0.215	0.225
7	0.23	0.23	0.23
8	0.23	0.245	0.235
9	0.23	0.26	0.24
10	0.23	0.27	0.24