





Simulation	Signal Tensor $\Theta$	Rank	Sign Rank	Global $\alpha$	CDF of Tensor Entries	Noise
1	$\mathcal{C} \times \mathbf{M}_1 \times \mathbf{M}_2 \times \mathbf{M}_3$	$3^3$	$\leq 3^3$	$\infty$		Uniform $[-0.3, 0.3]$
2	$ \mathbf{a} \otimes \mathbf{1} \otimes \mathbf{1} - \mathbf{1} \otimes \mathbf{a} \otimes \mathbf{1} $	$d$	$\leq 3$	1		Normal $\mathcal{N}(0, 0.15)$
3	$\log(0.5 + Z_{\max})$	$\geq d$	2	1		Uniform $[-0.1, 0.1]$
4	$2.5 - \exp(\mathcal{Z}_{\min}^{1/3})$	$\geq d$	2	1		Normal $\mathcal{N}(0, 0.15)$