

Table S6. Empirical false positive rate. Bottleneck model with varying onset τ of the bottleneck. Strength is fixed at $0.01N$. Significance levels α are based on theoretical formulae according to eqs (7) and (8).

τ	$\alpha = 0.01$			$\alpha = 0.05$			SKD*
	$T_2^{(\text{sum})}$	$T_2^{(\text{product})}$	$T_0^{(\text{dist})}$	$T_2^{(\text{sum})}$	$T_2^{(\text{product})}$	$T_0^{(\text{dist})}$	
$1 \cdot 10^{-4}$	0.02282	0.03524	0.00655	0.07318	0.12431	0.03148	0.10711
$2 \cdot 10^{-4}$	0.03035	0.05088	0.00641	0.09171	0.16072	0.03078	0.12756
$5 \cdot 10^{-4}$	0.04846	0.08163	0.0062	0.13872	0.24866	0.0299	0.17234
0.0010	0.06563	0.09262	0.00655	0.18736	0.32287	0.02934	0.21512
0.0020	0.07371	0.06852	0.00651	0.22373	0.31886	0.02813	0.25856
0.0050	0.0622	0.03664	0.00758	0.22119	0.18918	0.02802	0.25851
0.01	0.02998	0.0161	0.00896	0.19415	0.14563	0.02849	0.24116
0.02	0.01045	0.0094	0.00962	0.11888	0.08584	0.02759	0.18383
0.05	0.00308	0.00252	0.0092	0.04763	0.03502	0.02734	0.07976
0.1	0.00104	0.00098	0.00792	0.02201	0.01651	0.02593	0.04048
0.2	0.0006	0.00052	0.00713	0.01193	0.00972	0.02441	0.02766
0.5	0.00041	0.0003	0.00554	0.00849	0.00616	0.02259	0.0334
1.0	0.00024	0.00031	0.00586	0.00852	0.00631	0.02481	0.04479
100.0	0.0003	0.00031	0.00629	0.00901	0.00698	0.02782	0.05377

* SKD-test from [37].