

State-dependent information processing in gene regulatory networks

Supplementary Material

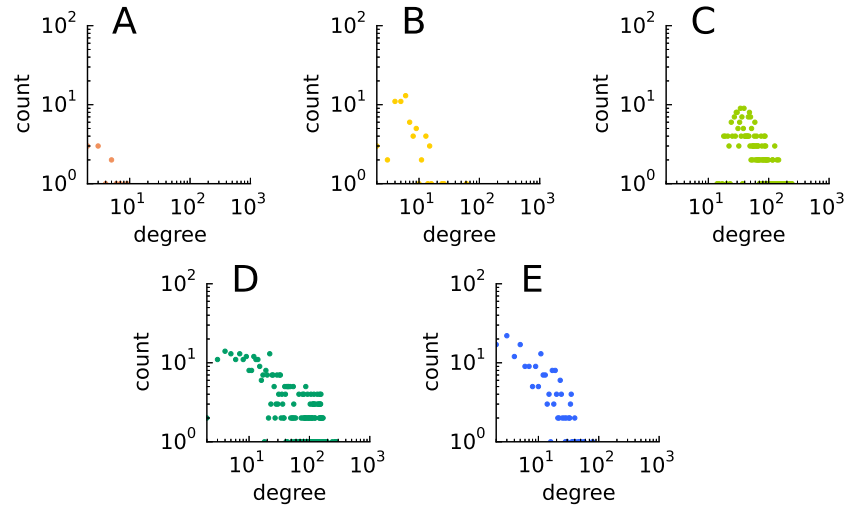
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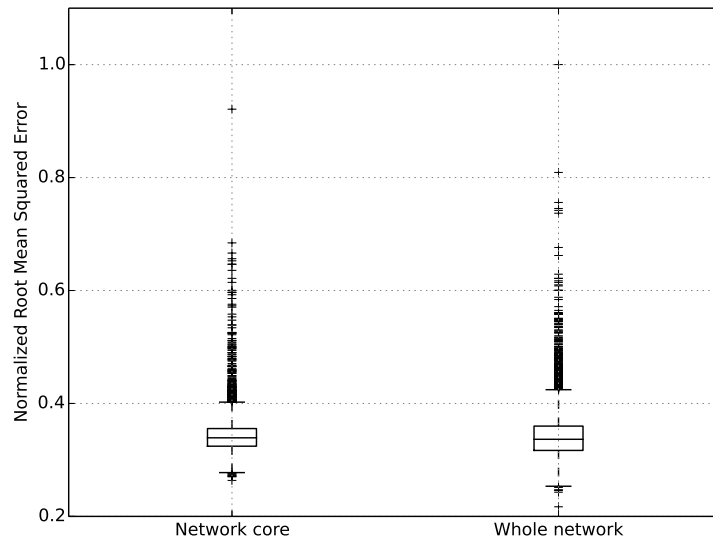
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Table 1: Number of nodes of the Ecocyc core that receive directly the input signal for each kind of stress circuit. Different subjective levels of certainty are included (the higher the threshold value, the more restrictive is the assignation of nodes to each group).

Stress signal	Certainty threshold				
	1	2	3	4	5
Any stress	58	57	52	43	29
Antibiotics	16	10	6	3	1
Anaerobiosis	6	6	5	3	2
Osmotic stress	13	13	7	6	3
Extreme pH	15	14	10	7	1
Oxidative stress	17	17	13	9	5
Starvation	30	29	25	18	10
Temperature	8	8	7	6	5



Supplementary Figure 1: Degree distribution of the cores of the analysed gene regulatory networks on a log-log scale. Each plot corresponds to one of the networks: DBTBS (A), Ecocyc (B), YEASTRACT (C), modENCODE (D) and ENCODE (E).



Supplementary Figure 2: Comparative results of 10000 trials of the 10th order NARMA prediction task using the whole Ecocyc network and only its recurrent core as reservoir.