Title:	Synthetic gene networks as potential flexible parallel logic gates
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Issue Date:	2011
Publisher:	Europhysics Letters Association
Citation:	EPL, 93 (5), art. no. 50001
Abstract:	We show how a synthetic gene network can function, in an optimal window of noise, as a robust logic gate. Interestingly, noise enhances the reliability of the logic operation. Further, the noise level can also be used to switch logic functionality, for instance toggle between AND, OR and XOR gates. We also consider a two-dimensional model of a gene network, where we show how two complementary gate operations can be achieved simultaneously. This indicates the flexible parallel processing potential of this biological system.
Description:	Only IISERM authors are available in the record.
URI:	http://iopscience.iop.org/0295-5075/93/5/50001 (http://iopscience.iop.org/0295-5075/93/5/50001) doi:10.1088/1367-2630/13/6/065003 (doi:10.1088/1367-2630/13/6/065003)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)