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Title:	Noise-assisted morphing of memory and logic function
Authors:	Kohar, Vivek (/jspui/browse?type=author&value=Kohar%2C+Vivek) Sinha, Sudeshna (/jspui/browse?type=author&value=Sinha%2C+Sudeshna)
Keywords:	Logic gates Memory Nonlinear circuit
Issue Date:	2012
Publisher:	Elsevier B.V.
Citation:	Physics Letters, Section A: General, Atomic and Solid State Physics, 376 (8-9), pp. 957-962.
Abstract:	We demonstrate how noise allows a bistable system to behave as a memory device, as well as a logic gate. Namely, in some optimal range of noise, the system can operate flexibly, both as a NAND/AND gate and a Set-Reset latch, by varying an asymmetrizing bias. Thus we show how this system implements memory, even for sub-threshold input signals, using noise constructively to store information. This can lead to the development of reconfigurable devices, that can switch efficiently between memory tasks and logic operations.
URI:	http://www.sciencedirect.com/science/article/pii/S0375960112000643 (http://www.sciencedirect.com/science/article/pii/S0375960112000643) http://dx.doi.org/10.1016/j.physleta.2012.01.039 (http://dx.doi.org/10.1016/j.physleta.2012.01.039)
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