



# Library Indian Institute of Science Education and Research Mohali



**DSpace@IISERMohali (/jspui/)**  
**/ Publications of IISER Mohali (/jspui/handle/123456789/4)**  
**/ Research Articles (/jspui/handle/123456789/9)**

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/87>

Title:	Noise Enhanced Logic Gates
Authors:	Sinha, Sudeshna (/jspui/browse?type=author&value=Sinha%2C+Sudeshna)
Issue Date:	2011
Publisher:	American Institute of Physics
Citation:	AIP Conf. Proc. 1339, pp. 67-77
Abstract:	<p>It was observed recently that, when one drives a two-state system with two square wave as input, the response of the system mirrors a logical output (NOR/OR). The probability of obtaining the correct logic response is controlled by the interplay between the noise-floor and the nonlinearity. As one increases the noise intensity, the probability of the output reflecting a NOR/OR operation increases to unity in a window of moderate noise, and then decreases to zero again for very large noise. This concept of noise enhanced logic gate performance under optimal noise was called: Logical Stochastic Resonance (LSR). Here we review this concept of Logical Stochastic Resonance and provide details of suitable electronic circuit systems demonstrating LSR. We also review the extension of this approach to realize logic gates with Coherence Resonance Systems (LCR).</p>
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://aip.scitation.org/doi/10.1063/1.3574845">https://aip.scitation.org/doi/10.1063/1.3574845</a> ( <a href="https://aip.scitation.org/doi/10.1063/1.3574845">https://aip.scitation.org/doi/10.1063/1.3574845</a> )
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Untitled 1.odt (/jspui/bitstream/123456789/87/1/Untitled%201.odt)		8.44 kB	OpenDocument Text	<a href="/jspui/bitstream/123456789/87/">View/Open (/jspui/bitstream/123456789/87/)</a>

[Show full item record \(/jspui/handle/123456789/87?mode=full\)](/jspui/handle/123456789/87?mode=full)

[📊 \(/jspui/handle/123456789/87/statistics\)](/jspui/handle/123456789/87/statistics)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

