



# 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/123456789/86>

Title:	Noise-free logical stochastic resonance
Authors:	Kohar, Vivek (/jspui/browse?type=author&value=Kohar%2C+Vivek) Sinha, Sudeshna (/jspui/browse?type=author&value=Sinha%2C+Sudeshna)
Keywords:	Bistable system Circuit experiments Dynamical behaviors
Issue Date:	2011
Publisher:	American Physical Society
Citation:	Physical Review E - Statistical, Nonlinear, and Soft Matter Physics, 84 (5), art. no. 055201
Abstract:	The phenomena of logical stochastic resonance (LSR) was demonstrated recently: namely, when a bistable system is driven by two inputs it consistently yields a response mirroring a logic function of the two inputs in an optimal window of moderate noise. Here we examine the intriguing possibility of obtaining dynamical behavior equivalent to LSR in a noise-free bistable system, subjected only to periodic forcing, such as sinusoidal driving or rectangular pulse trains. We find that such a system, despite having no stochastic influence, also yields phenomena analogous to LSR, in an appropriate window of frequency and amplitude of the periodic forcing. The results are corroborated by circuit experiments.
Description:	Only IISERM authors are available in the record.
URI:	<a href="http://pre.aps.org/abstract/PRE/v84/i5/e055201">http://pre.aps.org/abstract/PRE/v84/i5/e055201</a> ( <a href="http://pre.aps.org/abstract/PRE/v84/i5/e055201">http://pre.aps.org/abstract/PRE/v84/i5/e055201</a> )
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

## Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/86/3/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text	<a href="#">View/Open (/jspui/bitstream/123456789/86/3/Need%20to%20add%20pdf.odt)</a>

[Show full item record \(/jspui/handle/123456789/86?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/86/statistics\)](#)

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