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Leon O. CHUA

Publication
IEICE TRANSACTIONS on Fundamentals of Electronics, Communications and Computer Sciences Vol.E77-A No.11 pp.1811-1822
Publication Date: 1994/11/25
Online ISSN:
DOI:
Print ISSN: 0916-8508
Type of Manuscript: Special Section PAPER (Special Section on Nonlinear Theory and Its Applications)
Category: Chaos and Related Topics
Keyword:
Chua's circuit, Chua's oscillator,

Summary:
More than 200 papers, two special issues (Journal of Circuits, Systems, and Computers, March, June, 1993, and IEEE Trans. on Circuits and Systems, vol.40, no.10, October 1993), an International workshop on "Chua's Circuit: chaotic phenomena and applications" at NOLTA'93, and a book (Edited by R. N. Madan, World Scientific, 1993) on Chua's circuit have been published since its inception a decade ago. This review paper attempts to present an overview of these timely publications, almost all within the last 6 months, and to identify four milestones of this very active research area. An important milestone is the recent fabrication of a *monolithic* Chua's circuit. The robustness of this IC chip demonstrates that an array of Chua's circuits can also be fabricated into a monolithic chip, thereby opening the floodgate to many unconventional applications in information technology, synergetics, and even music. The second milestone is the recent global unfolding of Chua's circuit, obtained by adding a linear resistor in series with the inductor to obtain a *canonical* Chua's circuit--now generally referred to as *Chua's oscillator*. This circuit is most significant because it is structurally the *simplest* (it contain only 6 circuit elements) but dynamically the *most complex* among all nonlinear circuits and systems described by a 21–parameter family of continuous odd–symmetric piecewise–linear vector fields. The third milestone is the recent discovery of several important new phenomena in Chua's Circuits, e.g., *stochastic resonance, chaos–chaos type intermittency, 1/f noise spectrum*, etc. These new phenomena could have far-reaching theoretical and practical significance. The fourth milestone is the theoretical and experimental demonstration that Chua's circuit can be easily *controlled* from a chaotic regime to a prescribed periodic or constant orbit, or it can be *synchronized* with 2 or more identical Chua's circuits, operating in an oscillatory, or a chaotic regime. These recent breakthroughs have ushered in a new era where *chaos* is deliberately created and exploited for unconventional applications, e.g., secure communication.

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