

A CHAOTIC ATTRACTOR FROM AN AUTONOMOUS
3-SEGMENT PIECEWISE-LINEAR CIRCUIT

T. Matsumoto (松本隆)

Department of Electrical Engineering
Waseda University, Tokyo 160, Japan

M. Komuro (小室元政)

Department of Mathematics
Tokyo Metropolitan University, Tokyo 158, Japan

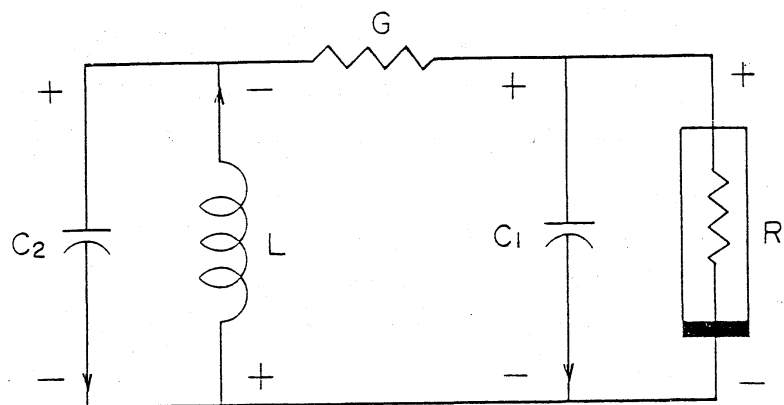
L. O. Chua

Department of Electrical Engineering and Computer Sciences
University of California, Berkeley, CA 94720

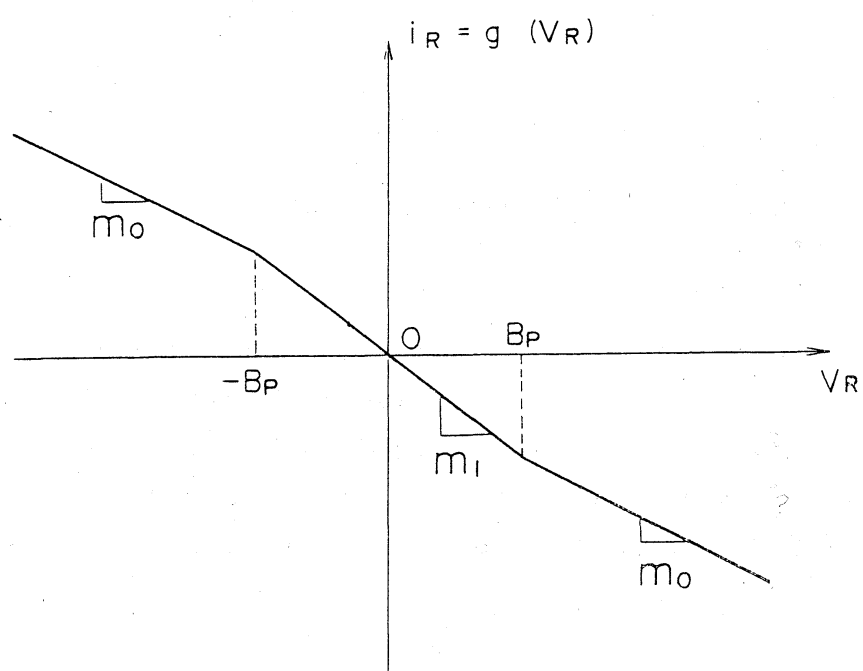
A B S T R A C T

A chaotic attractor has been observed with an extremely simple electrical circuit.

Consider the circuit of Fig. 1(a) where the nonlinear resistor is characterized by Fig. 1(b). With this simple circuit, a chaotic attractor of Fig. 2 has been observed. In addition to the sheet-like composition, the attractor has an interesting structure called the "double-scroll" structure. Details will be reported elsewhere.



(a)



(b)

Fig. 1

Fig. 2(a)

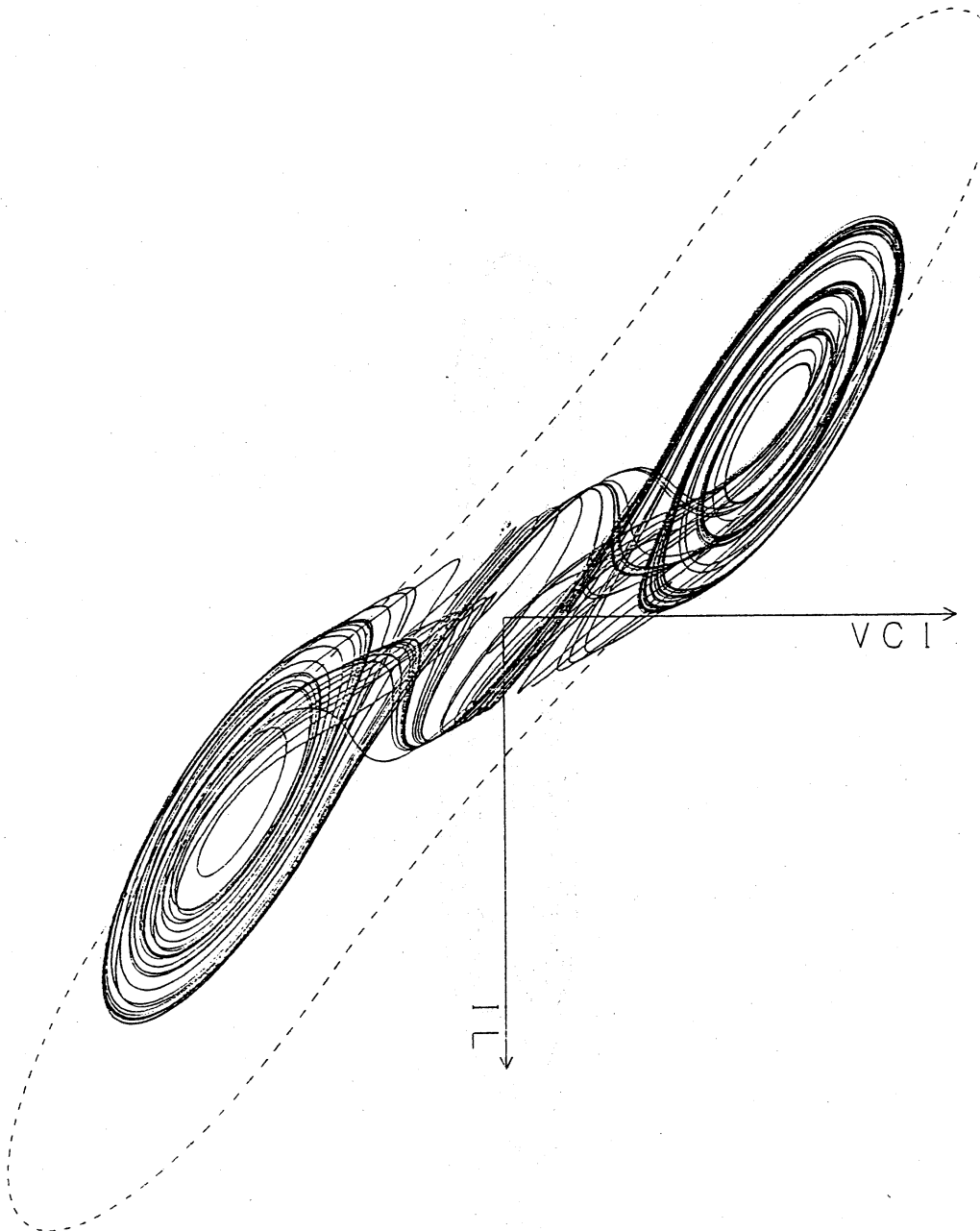
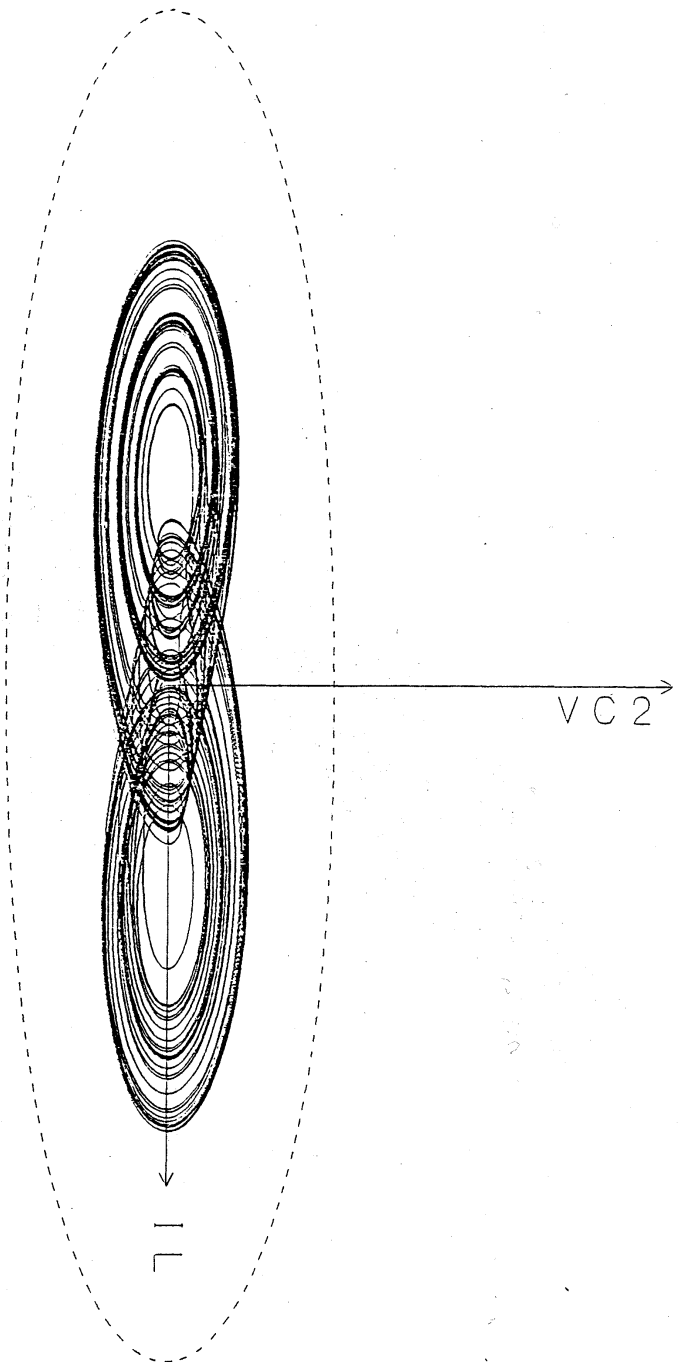


Fig. 2(b)



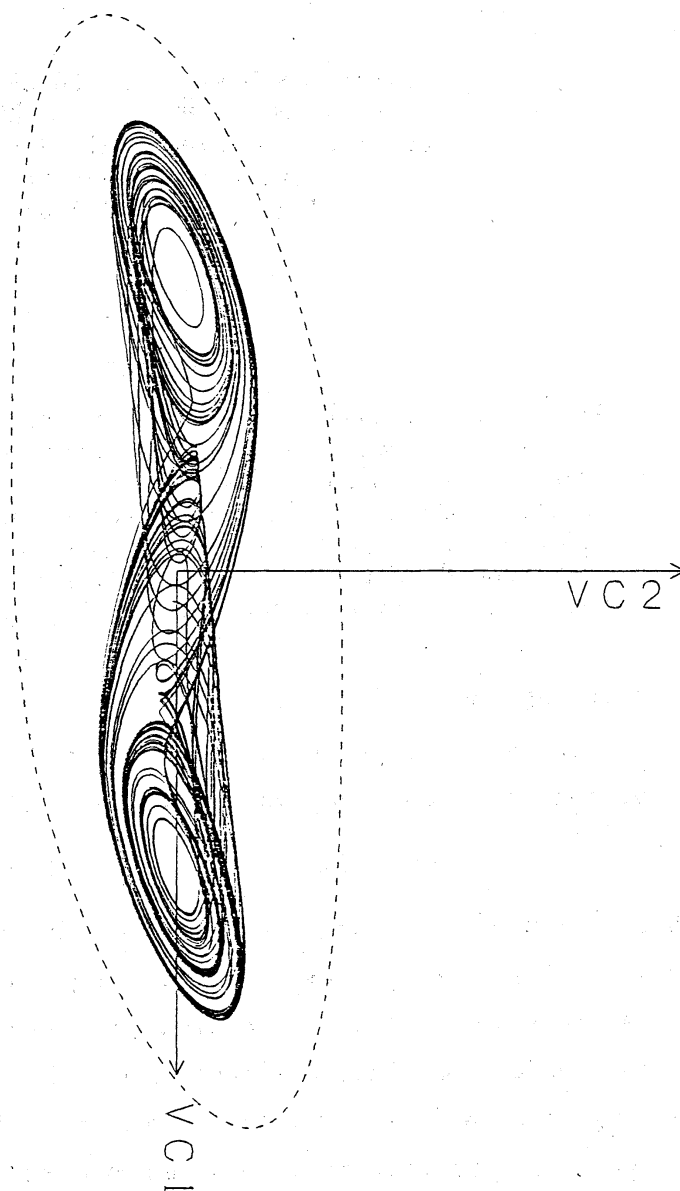


Fig. 2(c)