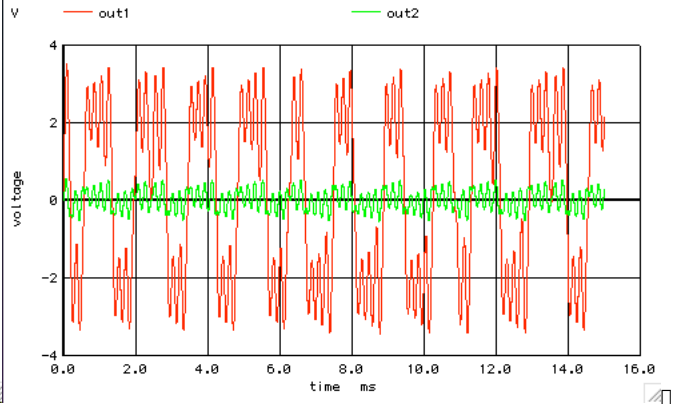
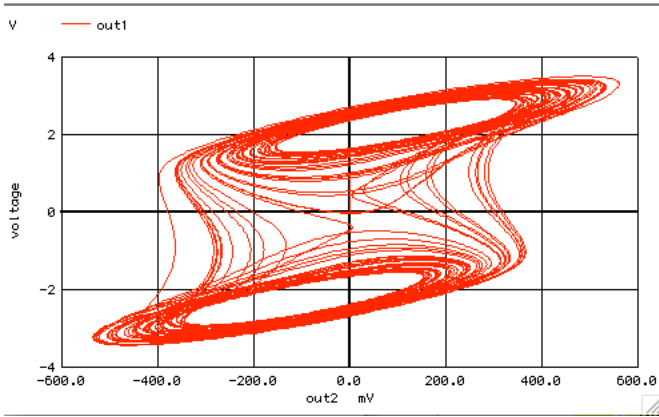


# CHUA\_CHAOS

**MULTI-DIMENSION OSCILLATION WITH RANDOM CROSS-TALK  
PLOTTED IN 2D.**



## CHUA\_CHAOS

```

*
*   OUT1
*
*
*   Chua's Circuit
*
*   +9V
*   VPL 47k R4
*   D1  3.3K
*   D2  3.3K
*   VNG 47k
*   V -9v
*
*   1.3k +/-
*   OUT2
*
*   R1 290
*   R2 290
*   R3 1.2k
*   R4 47k
*   R5 3.3k
*   R6 3.3k
*   R7 47k
*   R8 1.34045K
*   R9 65
*   C1 4.6n IC = 1
*   C2 69n
*   L1 8.5m
*   D1 DD
*   D2 DD
*
*   INN
*   OPA
*
*   OUT3
*   OUT4
*   OUT5
*   OUT
*
*   OPTIONS GMIN=1p METHOD=TRAP ABSTOL=1u TEMP=27 srcsteps = 1 gminsteps = 1
*   OPTIONS RELTOL=.001 ABSTOL=1n VNTOL=1n ITL4=500 ITL1=400
*
VCC VCC 0 DC 9
VEE VEE 0 DC -9

BOPA OUT4 0 V = 9*tanh(tanh(tanh( (V(OUT1)-V(INN))*30)*30)*30)
ROP OUT4 OUT5 5k
COP OUT5 0 30p
BOUT OUT3 0 V = V(OUT5)

R1 OUT1 OUT3 290
R2 INN OUT3 290
R3 INN 0 1.2K
R4 VPL VCC 47K
R5 VPL 0 3.3K
R6 VNG 0 3.3K
R7 VNG VEE 47K
R8 OUT1 OUT2 1.34045K
R9 OUT2 VL 65
C1 OUT1 0 4.6n IC = 1
C2 OUT2 0 69n
L1 VL 0 8.5m
D1 OUT1 VPL DD
D2 VNG OUT1 DD

```

=====The Model Files=====

```

.model DD D( IS=3.15e-18 rs = 1m)

.tran 1u 15m 0 1u UIC
.control
run
plot out1 out2
plot out1 vs out2
.endc
.end

```

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