

ALGORITHMS FOR CONTROLLING CHAOS: APPLICATION TO BVP OSCILLATOR

S. Rajeskar

*Senior Research Fellow, Dept. of Physics, Bharathidasan University,
Tiruchirapallin - 620024, Tamilnadu*

ABSTRACT

We discuss how chaotic dynamics can be converted into regular motion in Bonhoeffer-van der Pol oscillator. Using a control signal proportional to the actual and desired outputs we study the control of fixed points and limit cycles by making time-dependent perturbations of amplitude of external force. We show the round-off induced periodicity in the digital computer simulations of orbits on chaotic attractor. We illustrate the stabilization of unstable periodic orbits by adding periodic pulses of small magnitude.