A review of strategies for enhancement of dynamical robustness in coupled oscillators

Harsh Dev Singh1 †, Amit Sharma1,2 §

Department of Physics, University Institute of Science, Chandigarh University, Mohali, Punjab 140413, India

Centre of Excellence for Computational Physics, Department of Physics, University Institute of Science, Chandigarh University, Mohali, Punjab 140413, India

**†**Harshdev1260@gmail.com, §amit.e11102@cumail.in

**Abstract**. The network of self-sustaining oscillators is useful for investigating complicated phenomena in many fields of research and technology. The ageing of an oscillator is referred to as turning non-oscillatory due to some local disturbances that may have negative consequences on a network's macroscopic dynamical activities [1]. In this article, we look at effective strategies for improving the dynamical activity of a network of connected oscillators that is ageing. We focus on a control mechanism based on self-feedback delay [2], low pass filtering [3], attractive-repulsive interaction [4], and asymmetric interactions [5] in the network of coupled oscillators. There is considerable practical value in this mechanism, which presents a mechanism for maintaining regular oscillatory dynamics in a network of coupled oscillators suffering from local degradation in their dynamics.

References:

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