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Phase locking transitions in arrays of coupled anharmonic oscillators SACHIN TELANG, JULIAN SHEATS, STEPHAN HAAS — The Chaotic Dynamics of Coupled Oscillator arrays with cubic anharmonicity is studied. Our model includes damping terms and external time dependent forces. These Coupled oscillators are either phase-lock or behave chaotically or hyperchaotically, depending upon the magnitude of their inter-oscillator coupling strength and the frequency of the applied external force. The associated Lyapunov exponents are determined indicating the type of attractor, and phase diagrams are presented.

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