

Alternate Phase Synchronization in Coupled Chaotic Oscillators

ZHENG Zhi-Gang^{1,2} and ZHOU Chang-Song²

¹ Department of Physics, Beijing Normal University, Beijing 100875, China

² Center for Nonlinear Studies, Hong Kong Baptist University, Hong Kong, China

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Abstract: Phase locking dynamics in coupled chaotic oscillators is investigated. For chaotic systems with a poorly coherent phase variable, the imperfect phase locking can be observed before the onset of a complete phase synchronization. The temporal alternations among $m:n$ phase lockings are found, which originate from an overlap of $m:n$ Arnold tongues.

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Key words: phase synchronization, Arnold tongues, Lyapunov exponent

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