

Heteroclinic dynamics between synchrony patterns in phase oscillator networks with higher-order interactions.

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Phase oscillator networks with nonpairwise higher-order interactions that include nonlinear terms of three and more phase variables have received much attention recently. We show that coupled populations with such interactions can give rise to heteroclinic cycles and networks. The dynamics close to such networks exhibits sequential synchronization and desynchronization of oscillator populations. We also discuss the stability properties of these quasi-simple cycles. This is joint work with Alexander Lohse, Hamburg.

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