Repulsive Synchronization in an Array of Phase Oscillators LEV
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study the dynamics of an array of phase oscillators with repulsive coupling. Globally-
coupled network of identical oscillators settles on one of a family of synchronized
regimes characterized by zero mean field. However, variations of oscillator natural
frequencies destroy synchronization for sufficiently large number of coupled oscilla-
tors independently of the coupling strength. In locally coupled networks (with a
finite range of coupling less than the system size), the synchronization occurs even
for non-identical oscillators when coupling is sufficiently strong. In the synchronized
regime, a ring of repulsively coupled oscillators approaches linear phase distribution.

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