**Emergent dynamics of coupled oscillators**

Phase-coupled oscillators serve as paradigmatic models of dynamical networks in physics, biology, many other fields. Even if the oscillators are identical and the coupling scheme is symmetric they can demonstrate surprising variety of complex collective behavior - from phase and frequency clustering to developed space-temporal chaos. A characteristic example is given by chimera states for non-globally coupled Kuramoto-Sakaguchi model. The other examples of this type states are obtained when varying the coupling topology and its shape.

We analyze a two-group network of globally coupled phase oscillators including attractive and repelling interactions as prototypes of excitatory and inhibitory connections in neuronal networks. If excitation is stronger, the network dynamics tend to ensure complete synchronization. In the opposite case when inhibition is predominant, highly asymmetric phase clusters arise where one or more oscillators split up from the others synchronized. A special interest is offered by a solitary state with the only one splitting oscillator staying in anti-phase to the major cluster. We find analytically parameter regions for stability of the states and show that phenomenon is typical for more general networks, e.g. Va der Pol, Stuardt-Landau, FitzHug-Nagumo.