

Control and Synchronization**CT5.1**

Tuesday 17:45 - 19:45, Room H19

Controlling synchrony in oscillatory networks via act-and-wait algorithm

CT5.1-1

*Kestutis Pyragas and Irmantas Ratas***Control of synchronization bistability in oscillatory networks**

CT5.1-2

*Irmantas Ratas and Kestutis Pyragas***Cross-frequency synchronization of delay-coupled oscillators**

CT5.1-3

*Vladimir Klinshov***Mean-field treatment of collective motion in systems of delay-coupled stochastic excitable units**

CT5.1-4

*Igor Franovic, Kristina Todorovic, Nebojsa Vasovic, and Nikola Buric***Dynamically emergent explosive synchronization**

CT5.1-5

*Vanesa Avalos-Gaytan, Juan Almendral, and Stefano Boccaletti***Robust synchronization analysis by quadratic phase equation**

CT5.1-6

*Wataru Kurebayashi, Sho Shirasaka, and Hiroya Nakao***Controlling synchrony in oscillatory networks via act-and-wait algorithm****CT5.1-1***Kestutis Pyragas and Irmantas Ratas*

17:45

Center for Physical Sciences and Technology, A. Gostauto 11, LT-01108 Vilnius, Lithuania
 email: pyragas@pfi.lt

The act-and-wait control algorithm is proposed to suppress synchrony in globally coupled oscillatory networks in the situation when the simultaneous registration and stimulation of the system is not possible. The algorithm involves the periodic repetition of the registration (wait) and stimulation (act) stages, such that in the first stage the mean field of the free system is recorded in a memory and in the second stage the system is stimulated with the recorded signal. A modified version of the algorithm that takes into account the charge-balanced requirement is considered as well. The efficiency of our algorithm is demonstrated analytically and numerically for globally coupled Landau-Stuart oscillators, and synaptically all-to-all coupled FitzHugh-Nagumo as well as Hodgkin-Huxley neurons.