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Synchronization and control of heterogeneous networks

Synchronization of networks of coupled dynamical systems has been the subject of intensive investigation. An important tool is that of the master stability function that can be used to break the synchronization stability problem into problems of lower dimensionality. The original approach is based on diagonalizing a matrix that represents the network topology; however such diagonalization is not always possible, in which case other tools can be possibly employed for the dimensionality reduction, such as the techniques for simultaneous block diagonalization of matrices. In this talk we discuss the application of such techniques to both the general problems of synchronization and control of complex heterogeneous dynamical networks.

The event is part of the Seminar organized by Eckehard Schöll and Serhiy Yanchuk (TU Berlin), Rico Berner (HU Berlin), and Jakub Sawicki (PIK Potsdam). For information on how to access the event, please contact any of the above or: henning.reinken@itp.tu-berlin.de

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