

Engineering Sciences and Applied Mathematics

Steering and controlling systems of interdependent networks

Presented by:

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Networks are at the core of modern society, spanning physical, biological and social systems. Each distinct network is typically a complex system, shaped by the collective action of individual agents and displaying emergent behaviors. Moreover, collections of these complex networks often interact and depend upon one another, which can lead to unanticipated consequences such as cascading failures and novel phase transitions. Simple mathematical models of networks can provide important insights into such phenomena. Here we will cover several such models, beginning with control of phase transitions in an individual network then moving on to modeling phenomena in coupled networks, including cascading failures and optimal interdependence.

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For Further information see <http://easm.northwestern.edu>

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