



生物信息学研究中心

Center of Bioinformatics

学术报告

题目： On the Size of the Minimum Dominating Set and its
Relation to Controllability in a Scale-Free Network

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Abstract: In this work, we address complex network controllability from the perspective of the minimum dominating set (MDS). Our theoretical calculations, simulations using artificially generated networks as well as real-world networks analyses show that the more heterogeneous a network degree distribution is, the easier it is to control the entire system. We demonstrate that relatively few nodes are needed to control the entire network if the power-law degree exponent is smaller than 2, whereas many nodes are required if it is larger than 2. This is a joint work with Jose Nacher in Toho University.