



Controlling complex networks: How much energy is needed?

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The outstanding problem of controlling complex networks is relevant to many areas of science and engineering, and has the potential to generate technological breakthroughs as well. We address the physically important issue of the energy required for achieving control by deriving and validating scaling laws for the lower and upper energy bounds. These bounds represent a reasonable estimate of the energy cost associated with control, and provide a step forward from the current research on controllability toward ultimate control of complex networked dynamical systems.

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