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### **Universality in complex-network synchronization**

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Heterogeneity in the degree (connectivity) distribution has been shown to suppress synchronization in networks of symmetrically coupled oscillators with uniform coupling strength. In this contribution we uncover a condition for enhanced synchronization in weighted networks with asymmetric coupling. It is shown that in the optimum regime synchronizability is solely determined by the average degree and does not depend on the system size and the details of the degree distribution. In scale-free networks, where the average degree may increase with heterogeneity, while the overall cost involved in the network coupling is significantly reduced as compared to the case of unweighted coupling. Consequences for metabolic networks will be discussed.