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Carina Curto* (ccurto@psu.edu), ccurto@psu.edu. *Graph rules for inhibitory network dynamics.*

Many networks in the nervous system possess an abundance of inhibition, which serves to shape and stabilize neural dynamics. The neurons in such networks exhibit intricate patterns of connectivity, whose structure controls the allowed patterns of neural activity. In this work, we examine inhibitory threshold-linear networks whose dynamics are dictated by an underlying directed graph. We develop a set of parameter-independent graph rules that enable us to predict features of the dynamics from properties of the graph. These rules provide a direct link between the structure and function of these networks, and provides new insights into how connectivity may shape dynamics in real neural circuits. Our results can be found in <https://arxiv.org/abs/1804.00794>. (Received September 24, 2018)