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Growing Networks with Positive and Negative Links CORYNNE DECH, SHADRACK ANTWI, LEAH SHAW, College of William and Mary — Scale-free networks grown via preferential attachment have been used to model real-world networks such as the Internet, citation networks, and social networks. Here we investigate signed scale-free networks where an edge represents a positive or negative connection. We present analytic results and simulation for a growing signed network model. We compare the signed network to an unsigned scale-free network. We discuss several options for preferential attachment in a signed network that could be further adapted to model the accumulation of links over time in real-world signed networks.

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