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Daniel S Silver (silver@southalabama.edu) and **Susan G Williams***
(swilliam@southalabama.edu). *Mahler measure and complexity of periodic graphs.*

An infinite graph G is d -periodic if Z^d acts freely on G by automorphisms, with finite quotient graph \overline{G} . We may associate to G an algebraic dynamical system with entropy equal to the logarithmic Mahler measure of the *Laplace polynomial* of G , a polynomial easily computed from G . This entropy coincides with another measure of complexity, a growth rate of the number of spanning trees in a sequence of finite covers of \overline{G} . Recent work extends these results to graphs with edge weights of 1 or -1, which are of interest in knot theory, and gives some complexity bounds. (Received September 20, 2021)