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**Nicole Eikmeier\*** (eikmeier@grinnell.edu). *Higher-order Preferential Attachment Models.*

Preferential attachment models are a common class of graph models which have been used to explain why power-law distributions appear in the degree sequences of real network data. Among other properties of real-world networks, they commonly have non-trivial clustering coefficients due to an abundance of triangles as well as power-laws in the eigenvalue spectra. In this talk we present a Higher-Order Generalized Preferential Attachment Model that, by construction, has nontrivial clustering. In this model we allow for the addition of an arbitrary number of edges, producing more complex structures than in a traditional preferential attachment model. (Received September 16, 2019)