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Sinan G Aksoy* (saksoy@ucsd.edu), **Tamara G Kolda** and **Ali Pinar**. *Measuring and modeling bipartite graphs with community structure.*

We propose a generative model for large-scale bipartite graphs which can be easily tuned to reproduce the characteristics of real-world networks. The characteristics we consider are the degree distributions and the metamorphosis coefficient. The metamorphosis coefficient, a bipartite analogue of the clustering coefficient, is the proportion of length three paths that participate in length four cycles. We further define edge, node, and degreewise metamorphosis coefficients, enabling a more detailed understanding of bipartite clustering. As demonstrated on several real-world data sets, our proposed bipartite block two-level Erdős-Rényi (BTER) model reproduces both the degree distributions as well as the degreewise metamorphosis coefficients. (Received February 27, 2017)