**k-Neighborhood Degree List of a Graph with Large Cycles**

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Let $N_k(v)$ denote the set of vertices at distance $k$ from $v$. The $k$-neighborhood degree list of a graph is a listing of the degrees of vertices in $N_k(v)$, for every vertex $v$. Threshold graphs are those that are uniquely determined by their degree sequence. In a similar manner we can ask what sort of graphs are uniquely determined by their $k$-neighborhood degree lists. Barrus and Donovan answered this question for $k = 1$. In an earlier paper we gave a different proof of their result and extended it to $k = 2$, provided the graph had diameter 2. In this talk we remove the diameter restriction and consider the class of graphs with no cycles of length less than 5. For this class of graphs, we give a complete characterization when $k = 2$.

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