

## DNA Self-Assembly: Friendship Graphs

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Based on the tile method for DNA self-assembly, which involves branched junction molecules whose flexible  $k$ -arms are double strands of DNA, we design a collection of tiles that will construct a nanostructure shaped like a target graph  $G$ . We find the minimum number of tile and bond-edge types required to construct friendship graphs and related graphs in three different scenarios representing different levels of laboratory constraints.

Keywords: Self-assembling DNA Graphs, friendship graphs