1145-VP-2776 **Curtis Clark*** (`curtis.clark@morehouse.edu`), 830 Westview Drive, Atlanta, GA 30314.
Ultimately Economical Multigraphs. Preliminary report.

For positive integers λ and v, λK_v denotes the complete multigraph with λ parallel edges between each pair of v distinct vertices. For vertices x and y in a multigraph F, the multiplicity of the edge xy is the number of edges that have x and y as their endpoints, denoted $\mu_F(xy)$. Let F be a multigraph with $v(F)$ vertices and $e(F)$ edges such that $v(F) \leqq v$ and $\mu_F(xy) \leqq \lambda$ for each pair of vertices x and y in F. In the F-achievement game on λK_v, two players alternately color different edges of λK_v so as to make a copy of F in his color. The multigraph F is achievable on λK_v if a player can make a copy of F in his color. The least number of moves it takes for this player to win is the move number of F on λK_v. The multigraph F is economical on λK_v if the move number of F is equal to $e(F)$. The multigraph F is ultimately economical if there exists a t such that F is economical on λK_t. Some families of ultimately economical multigraphs are determined, and it is shown that there are no forbidden subgraphs for ultimately economical multigraphs.

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