Primitive C_4 -decompositions of cocktail party graphs

Michael W. Schroeder*, Stetson University

Given a graph G and a decomposition \mathcal{D} of G, we say that \mathcal{D} is primitive if no proper, non-trivial subset of \mathcal{D} acts as a decomposition of an induced subgraph of G In this talk, we show that the necessary numerical conditions are sufficient for a cocktail party graph to have a primitive C_4 -decomposition.

Keywords: cycle decomposition, cycle system, subsystems, primitive (cycle) decomposition, subdecomposition