Decomposing complete graphs into unicyclic triangular graphs with eight edges

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A *decomposition* of the complete graph K_n is a collection of pairwise edge disjoint subgraphs $\mathbf{G} = \{G_0, G_1, ..., G_d\}$ such that every edge of K_n belongs to exactly one member of $\mathbf{G}$. If every subgraph in $\mathbf{G}$ is isomorphic to a given graph G, then we say that K_n allows a *G-decomposition*, or *G-design*. In this talk, we provide necessary and sufficient conditions for the decomposition of K_n into unicyclic triangular graphs with eight edges.

Keywords: graph decomposition, ρ-labeling, unicyclic graphs