Graph designs and resolvable designs

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Given a collection of graphs $\mathcal{H}$, an $\mathcal{H}$-decomposition of a graph G is a decomposition of the edges of G into isomorphic copies of graphs in $\mathcal{H}$. The copies of $H \in \mathcal{H}$ in the decomposition are called blocks. Such a decomposition is called resolvable if it is possible to partition the blocks into classes P_i such that every point of G appears exactly once in some block of each P_i. Moreover a class is called uniform if every block of the class is isomorphic to the same graph from $\mathcal{H}$.

In this talk, we will present famous problems in the area of graph designs and explain recent results on uniformly resolvable $\mathcal{H}$-decomposition problems.