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*Decomposition problems for graphs*

In this talk, I will discuss recent progress on graph decomposition problems. Here a graph  $G$  has an  $F$ -decomposition if the edges of  $G$  can be covered by edge-disjoint copies of  $F$ . Usually we consider the case when  $G$  is a large graph and  $F$  is small or sparse.

A fundamental theorem of Wilson states that, for every graph  $F$ , every sufficiently large clique has an  $F$ -decomposition, provided that the clique satisfies the necessary divisibility conditions. We extend Wilson's theorem to graphs which are allowed to be far from complete (joint work with B. Barber, A. Lo and D. Osthus). In general, this area abounds with open problems – I will discuss some of these and mention some related results.