Edge-decompositions of graphs with high minimum degree.

A fundamental theorem of Wilson states that, for every graph $F$, every sufficiently large $F$-divisible clique has an $F$-decomposition. Here a graph $G$ is $F$-divisible if $e(F)$ divides $e(G)$ and the greatest common divisor of the degrees of $F$ divides the greatest common divisor of the degrees of $G$, and $G$ has an $F$-decomposition if the edges of $G$ can be covered by edge-disjoint copies of $F$. We extend this result to graphs which are allowed to be far from complete: we show that every sufficiently large $F$-divisible graph $G$ on $n$ vertices with minimum degree at least $(1 - |F|^{-4})n$ has an $F$-decomposition. Our main contribution is a general method which turns an approximate decomposition into an exact one. (Received July 28, 2014)