Abstract: A family of sets is intersecting if any two members have a nonempty intersection. We call an intersecting family trivial if all of its members have a nonempty intersection. Let $X$ be a set of $n$ elements. The celebrated Erdos-Ko-Rado theorem (EKR) says that whenever $n \geq 2k$, the maximum size of an intersecting family of $k$-subsets of $X$ is attained by trivial intersecting families. The Hilton-Milner theorem says that the maximum size of a nontrivial intersecting family of $k$-subsets of $X$ is attained by the family $HM$, which consists a fixed $k$-set $S$ and all $k$-subsets of $X$ that contains a fixed element $x \in X - S$ and at least one element from $S$. We prove a minimum degree version of the EKR, which implies the EKR as a corollary. We also prove a degree version of the Hilton-Milner theorem for $n > 30k^2$.

These are joint works with Jie Han and Hao Huang.