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Urbana, IL 61801. *A proof of the stability of extremal graphs.*

We present a concise, contemporary proof (i.e., one using Szemerédi's regularity lemma) for the following classical stability result of Simonovits 1968:

If an  $n$ -vertex  $F$ -free graph  $G$  is almost extremal,  $\text{chr}(F) = p + 1$ , then the structure of  $G$  is close to a  $p$ -partite Turán graph. More precisely, for every graph  $F$  and  $\varepsilon > 0$  there exists a  $\delta > 0$  and a bound  $n_0$  (depending on  $F$  and  $\varepsilon$ ) such that if  $n > n_0$  and

$$e(G) > \left(1 - \frac{1}{p}\right) \binom{n}{2} - \delta n^2$$

then one can change (add and delete) at most  $\varepsilon n^2$  edges of  $G$  and obtain a complete  $p$ -partite graph. (Received January 23, 2007)