1038-05-73 **Noga Alon**, **Jozsef Balogh**, **Alexandr V. Kostochka** and **Wojciech Samotij***
(`samotij2@uiuc.edu`). *The number of induced subgraphs with distinct size or order.* Preliminary
report.

A graph is called *trivial* if it is either complete or empty. Ramsey's theorem states that every n-vertex graph contains an
induced trivial subgraph of order at least $\Omega(\log n)$. We say that an n-vertex graph G is *c-Ramsey* if it does not contain
a trivial induced subgraph of order greater than $c \log n$. Erdős, Faudree and Sós conjectured that every c-Ramsey graph
with n vertices contains $\Omega(n^{5/2})$ induced subgraphs any two of which differ either in the number of vertices or in the
number of edges, i.e., the number of distinct pairs $(|V(H)|, |E(H)|)$, as H ranges over all induced subgraphs of G, is at
least $\Omega(n^{5/2})$. Recently Alon and Kostochka proved that the number of distinct pairs is at least $\Omega(n^2)$. In an ongoing
work we further improve their bound. (Received January 29, 2008)