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**P D Johnson\*** (johnspd@auburn.edu), Dept. of Math. and Stat., Auburn University, AL 36849,  
and **R N Mohapatra**. *Inequalities relating degrees of adjacent nodes to the average degree in  
edge-weighted uniform hypergraphs.*

We give a class of inequalities as alluded to in the title. The class includes some well known "classical" inequalities and some inobvious variants of them. As a special case we derive an endless supply of inequalities involving real polynomials in several variables, each arising from a uniform hypergraph, the hyperedges of which index the variables. This work is about generating function inequalities from uniform hypergraphs; going the other way, producing a hypergraph to prove a suspected inequality, is an unexplored process. (Received August 09, 2005)