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Prakash Belkale* (belkale@email.unc.edu), CB # 3250, Philips Hall, University of North Carolina, Chapel Hill, NC 27599. *Geometric Proof of a Conjecture of Fulton and generalizations.*

We give a geometric proof of a conjecture of W. Fulton on the multiplicities of irreducible representations in a tensor product of irreducible representations for $GL(r)$. This was previously proved by combinatorial methods by Knutson-Tao-Woodward. The geometric proof allows us to prove (new) generalisations of Fulton's conjecture in quiver theoretic and quantum cohomological settings. (Received January 05, 2007)