1079-11-364 **Qiang Wang*** (wang@math.carleton.ca), 1125 Colonel By Drive, Ottawa, ON K1S5B6, Canada.

*On a conjecture of polynomials over finite fields with prescribed range.*

We show that, for any integer $\ell$ with $q - \sqrt{p} - 1 \leq \ell < q - 3$ where $q = p^n$ and $p > 9$, there exists a multiset $M$ satisfying that $0 \in M$ has the highest multiplicity $\ell$ and $\sum_{b \in M} b = 0$ such that every polynomial over finite fields $\mathbb{F}_q$ with the prescribed range $M$ has degree greater than $\ell$. This disproves a recent conjecture by Gács et al. (Permutations, hyperplanes and polynomials over finite fields, Finite Fields Appl. 16 (2010), 301-314). This is a joint work with Amela Muratović-Ribić. (Received January 18, 2012)