962-31-282   **Shusen Ding*** (`sding@seattleu.edu`), 24302 SE 3rd PL, Redmond, WA 98053. *Parametric*
Versions of the Weighted Caccioppoli-type Inequalities for A-Harmonic Tensors.

A differential form u is called an A-harmonic tensor if u satisfies the A-harmonic equation: $d * A(x, du) = 0$, where A is an operator satisfying some conditions, d is a differential operator and $d*$ is its formal adjoint operator defined by the Hodge star operator. Similarly, a differential form u is called a p-harmonic tensor if $d * (|du|^{(p-2)}du) = 0$ and $d * u = 0$, where $p > 1$. It is easy to see that p-harmonic tensors are extensions of p-harmonic functions and A-harmonic tensors are generalizations of p-harmonic tensors. In this talk, we prove parametric versions of the weighted caccioppoli-type inequality for A-harmonic tensors. By choosing the parameter to be fixed values, we find that some existing results are special cases of our results. (Received September 07, 2000)