1093-13-209 **Vinh An Pham*** (vapnnc@mail.missouri.edu), Mathematics Department, University of Missouri-Columbia, Columbia, MO 65211. *Ramification of Local Rings along Valuations.*

Consider the standard setting of ramification theory of valuations, say, K^*/K is a finite extension of algebraic function fields over some ground field k, ν^* is a k-valuation of K^* with its restriction ν on K, R and S are algebraic local rings which are contained in K and K^* respectively and are dominated by ν^*. Similar to the familiar associated graded ring assigned to an ideal filtration in a commutative ring, we also have the associated graded ring of a valuation (denoted by $gr_\nu(R)$ and $gr_{\nu^*}(S)$ in our settings), suggested and used by Tessier in his work on resolution of singularities. For function fields of algebraic surfaces over algebraically closed fields k of characteristic zero, Ghezzi, Ha and Kashcheyeva have shown that under finite sequences of quadratic transforms along ν^*, $gr_{\nu^*}(S)$ is eventually finitely generated over $gr_\nu(R)$. Our main result is to generalize this to the case of arbitrary ground field of characteristic zero. This is a joint work with Steven Dale Cutkosky. (Received August 15, 2013)