1100-53-279 **Kwok-Kun Kwong*** (`kwong@math.miami.edu`), Department of Mathematics, Ungar Building, University of Miami, Coral Gables, FL 33146. *Monotone quantities involving a weighted σ_k integral along inverse curvature flows.*

Monotone quantities along hypersurfaces evolving under the inverse mean curvature flow have many applications in geometry and relativity. In this talk, I will discuss a family of new monotone increasing quantities along inverse curvature flows in the Euclidean space. I will also discuss a related geometric inequality for closed hypersurfaces with positive k-th mean curvature. This is joint work with Pengzi Miao. (Received February 09, 2014)