1086-26-75 **George A Anastassiou*** (ganastss@memphis.edu), Department of Mathematical Sciences, University of Memphis, Memphis, TN 38152. *Fractional Integral Inequalities involving Convexity.* Preliminary report.

Here we present general integral inequalities involving convex and increasing functions applied to products of functions. As specific applications we derive a wide range of fractional inequalities of Hardy type. These involve the left and right: Erdélyi-Kober fractional integrals, mixed Riemann-Liouville fractional multiple integrals. Next we produce multivariate Poincaré type fractional inequalitites involving left fractional radial derivatives of Canavati type, Riemann-Liouville and Caputo types. The exposed inequalities are of L_{p} type, p≥1, and exponential type. (Received July 06, 2012)