

1070-35-151

Nestor Guillen* (nguillen@math.utexas.edu) and **Russell Schwab**
(rschwab@andrew.cmu.edu). *Aleksandrov-Bakelman-Pucci Estimates For Integro-Differential
Equations.*

The Aleksandrov-Bakelman-Pucci (ABP) estimate is crucial in the regularity theory of fully non-linear second order elliptic equations. Its main feature is it controls pointwise values of solutions in terms of integral averages of the right hand side. We provide an extension of this estimate to non-local (i.e. integro differential) fully non-linear elliptic equations and discuss several of its consequences. One of the main issues dealt with is the current lack of non-local geometric equations such as Monge-Ampere. (Received February 07, 2011)