

Meeting: 1002, Pittsburgh, Pennsylvania, SS 4A, Special Session on Partial Differential Equations and Applications

1002-35-211 **Gavin J Waters*** (Waters@math.udel.edu), 305 Ewing Hall, University of Delaware, Newark,
DE 19711. *An alternative approach to $W^{2,p}$ estimates of the heat equation in a domain $\Omega \subset \mathbb{R}^n$.*

This is an introduction to an alternative approach of finding the $W^{2,p}$ estimates of the heat equation in a domain $\Omega \subset \mathbb{R}^n$. This method utilizes the geometric structure of the L^p space by using the Hardy-Littlewood maximal functions to observe the decay of the space's distributional norm. (Received September 15, 2004)