

Meeting: 1000, Albuquerque, New Mexico, SS 13A, Special Session on Analysis and Geometry in Carnot-Caratheodory Spaces

1000-35-128 **Ismail Kombe*** (ikombe@okcu.edu), Mathematics Department, Oklahoma City University, 2501 N. Blackwelder, Oklahoma City, OK 73106-1493. *Doubly Nonlinear Parabolic Equations with singular lower order term on the Heisenberg group.*

In this talk we will discuss the nonexistence of positive solutions of the doubly nonlinear parabolic equation $u_t = \nabla_{\mathbb{H}^n} \cdot (u^{m-1} |\nabla_{\mathbb{H}^n} u|^{p-2} \nabla_{\mathbb{H}^n} u) + V u^{m+p-2}$ in a cylinder $\Omega \times (0, T)$, with initial condition $u(\cdot, 0) = u_0(\cdot) \geq 0$ and vanishing on the parabolic boundary $\partial\Omega \times (0, T)$. Here Ω is a bounded domain with smooth boundary in the Heisenberg group \mathbb{H}^n , $V \in L^1_{loc}(\Omega)$, $m \in \mathbb{R}$, $1 < p < 2n + 2$ and $m + p - 2 > 0$. (Received August 21, 2004)