1146-60-536 **Sunday Amaechi Asogwa*** (saa0020@auburn.edu), 221 Parker Hall, 221 Parker Hall, Auburn, AL 36849, and **Erkan Nane** (ezn0001@auburn.edu), 221 Parker Hall, Auburn, AL 36849.
Intermittency fronts and blow-up results for the space-time fractional diffusion.

We consider the following time fractional stochastic heat type equation

$$\partial_t^\beta u_t(x) = -\nu(-\Delta)^{\alpha/2} u_t(x) + I_t^{1-\beta}[b(u) + \sigma(u)\stackrel{\cdot}{W}(t,x)]$$

in $(d+1)$ dimensions, where $\nu > 0, \beta \in (0,1)$, $\alpha \in (0,2]$. The operator ∂_t^β is the Caputo fractional derivative while $-(-\Delta)^{\alpha/2}$ is the generator of an isotropic α-stable Lévy process and $I_t^{1-\beta}$ is the Riesz fractional integral operator. The forcing noise denoted by $\stackrel{\cdot}{W}(t,x)$ is a space-time white noise.

First, when $b(u) = 0$ and $\sigma(u)$ is globally Lipschitz, we show that solutions are globally defined and discuss about the intermittency fronts. Next, when $b(u) = 0$ and $\sigma(u) \geq |u|^{1+\gamma}$, then we show that blow-up may occur. Finally, for $b(u) \geq |u|^{1+\eta}$ and $\sigma(u)$ globally Lipschitz, we show that blow may occur. (Received January 29, 2019)