1135-60-393 **Ngartelbaye Guerngar*** (nzg0017@auburn.edu), 560 Perry St, Apt 229, Auburn, AL 36830, and **Erkan Nane** (ezn0001@auburn.edu), Department of Math and Statistics, Auburn Uni, 221 Parker Hall, Auburn, AL 36849. *Some properties of the solution of SPDEs.*

Consider the non-linear space-time-fractional stochastic heat type equation

$$\partial_t^{\beta} u_t(x) = -\nu(-\Delta)^{\alpha/2} u_t(x) + I_t^{1-\beta}\Big[f(t,x) + \sigma(u_t(x))\dot{W}(t,x)\Big]$$

in $D \times (0,\infty)$, where D is a bounded subset of $\mathbb{R}^d$, $\nu > 0$, f is a non random source term, σ is a Lipschitz continuous function, $\beta \in (0,1)$, $\alpha \in (0,2]$ and $d < \min(2,\beta^{-1})\alpha$. ∂_t^{β} is the Caputo derivative, $-(-\Delta)^{\alpha/2}$ is the generator of an isotropic stable process, $I_t^{1-\beta}$ is the fractional integral operator and $\dot{W}(t,x)$ is a mean zero Gaussian random noise. Under suitable conditions, the equation above admits a unique (mild) solution. I will discuss some properties of such solution. (Received August 31, 2017)