1154-60-2320 **Sunday A. Asogwa** and **Jebessa B. Mijena*** (jebessa.mijena@gcsu.edu), 231 W. Hancock St., CBX 17, Milledgeville, GA 31061, and **Erkan Nane**. *Non-existence results for space-time fractional stochastic partial differential equations.*

Consider non-linear time-fractional stochastic reaction-diffusion equations of the following type,

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

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 $I^{1-\beta}$ is the Riesz fractional integral operator. The forcing noise denoted by $\stackrel{\cdot}{F}(t,x)$ is a Gaussian noise. These equations might be used as a model for materials with random thermal memory. We derive non-existence (blow-up) of global random field solutions under some additional conditions, most notably on b, σ and the initial condition. (Received September 17, 2019)