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Erkan Nane* (ezn0001@auburn.edu). *Analysis of space-time fractional stochastic partial differential equations.*

Stochastic partial differential equations and random fields have been used as successful models in various areas of applied mathematics, statistical mechanics, theoretical physics, theoretical neuroscience, theory of complex chemical reactions, fluid dynamics, hydrology, cosmology, mathematical finance, and other scientific areas.

In this talk I will consider non-linear space-time fractional stochastic heat type equations. These time fractional stochastic heat type equations are attractive models that might be used to model phenomenon with random effects with thermal memory. In this talk, I will discuss: (i) Existence and uniqueness of solutions and existence of a continuous version of the solution; (ii) absolute moments of the solutions of this equation grows exponentially; and (iii) intermittency fronts. Our results are significant extensions of those in recent papers by Foodun, Liu, Omaba (Preprint, 2014); Foondun and Khoshnevisan(*Electron. J. Probab.*, 2009, and Conus and Khoshnevisan (*Probab. Theory Related Fields*, 2012).

These results are our recent joint work with Jebessa B Mijena, Mohammud Foondun, Sunday Asogwa and Guerngar Ngartelbaye. (Received January 09, 2017)