Lectures on Pure and Applied Math

Research Topics in the Statistical Sciences

Announcing
A Seminar Presentation
on May 13, 2013 at 2:00 pm
Henry Lee Institute 301

at The University of New Haven

Dr. Jebessa B. Mijena

Department of Mathematics and Statistics
Auburn University

Title: Strong Analytic Solutions of Fractional Cauchy Problems

Abstract:

Fractional derivatives can be used to model time delays in a diffusion process, in which a cloud of particles spreads in a different manner than traditional diffusion and have appeared as an essential tool for the study of dynamics of various complex stochastic processes arising in anomalous diffusion in physics, finance, hydrology, and cell biology. When the order of the fractional derivative is distributed over the unit interval, it is useful for modeling a mixture of delay sources. In some special cases distributed order derivative can be used to model ultra-slow diffusion. In particular, we develop the strong analytic solutions of distributed order fractional Cauchy problems.

Further Information

Refreshments are served from 1:20 pm until 1:30 pm.