

Texas Tech University. Analysis Seminars.

Global well-posedness for the stochastic non-Newtonian fluid equations and convergence to the Navier-Stokes equations.

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Monday, March 04, 2019

Room: MATH 112. Time: 4:00pm.

ABSTRACT. I will deliver my talk in two sessions. The first part contains motivation and preliminaries about stochastic partial differential equations. The existence of global pathwise solutions for the stochastic non-Newtonian incompressible fluid equations in space dimension 2 is established in the second session. Moreover, I will show that said solutions converge in probability to the solution of the stochastic Navier-Stokes equations in the appropriate limit. Our approach is based on Galerkin approximation and the theory of martingale solutions.