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Meng Xu* (mxu@rockefeller.edu) and **Sivaguru Sri Sritharan** (sssriitha@nps.edu). *A stochastic Lagrangian particle model and nonlinear filtering for three dimensional Euler flow with jumps.*

In this talk I will introduce a stochastic Lagrangian particle model with jumps for the three dimensional Euler flow and study the associated nonlinear filtering problem. We apply results from backward integro-differential equation problem to prove uniqueness of solution to the Zakai equation. (Received January 12, 2012)