1035-60-311   **Anna Amirdjanova*** (`anutka@umich.edu`), 439 West Hall, 1085 S University Ave., Ann Arbor, MI 48109. *Multiple stochastic integrals with respect to Volterra random fields: Properties and Applications.*

The talk focuses on the properties of multiple stochastic integrals defined with respect to Volterra random fields. Applications of multiple stochastic integration to the problem of nonlinear filtering of random fields with a multiparameter Volterra-type Gaussian observation noise will be discussed. Some links between multiple stochastic integrals and Feynman path integrals will also be indicated. (Received September 01, 2007)