Meeting: 1006, Lubbock, Texas, SS 9A, Special Session on Theory and Application of Stochastic Differential Equations

1006-60-234 **Janusz S Golec*** (golec@fordham.edu), Department of Mathematics, Fordham University, Bronx, NY 10458. *Reflected Stochastic Integro-Differential Equations in Convex Regions.* Preliminary report.

We consider system of reflected stochastic integro-differential equations of the form:

$$\begin{aligned} d\xi_t &= b(t,\xi_t,\int_0^t \alpha(t,s,\xi_s)ds)dt + \sigma(t,\xi_t,\int_0^t \beta(t,s,\xi_s)ds)dB_t + d\varphi_t \\ \xi_0 &= x_0 \end{aligned}$$

in a bounded and convex domain $D \subset R^n$. Under some assumptions on the coefficients of the system and the domain D, we prove uniqueness and existence of solution for such equations. (Received February 15, 2005)