

Meeting: 1003, Atlanta, Georgia, SS 26A, AMS-SIAM Special Session on Dynamic Equations on Time Scales; Integer Sequences and Rational Maps, I

1003-60-1269 **Zephyrinus C. Okonkwo*** (zephyrinus.okonkwo@asurams.edu), Department of Math and Computer Science, Albany State University, 504 College Drive, Albany, GA 31705. *Almost periodicity in probability and neutral stochastic functional differential equations with causal operators.* Preliminary report.

This paper deals with almost periodicity in probability and stability of the solution process of a class of neutral functional differential equations of the form

$$d(\mathcal{V}x)(t, \omega) = (\mathcal{F}x)(t, \omega)dt + \mathcal{M}(t, x(t, \omega))dz(t, \omega) \quad (1)$$

with the initial condition

$$x(u, \omega) = x^0 \in R^n \quad (2)$$

where \mathcal{V} and \mathcal{F} are Volterra operators acting on certain function spaces, \mathcal{M} is a nonlinear map and $z(t, \omega)$ is a normalized Wiener process. Criterion for almost periodicity in probability and various stability criteria are presented. (Received October 05, 2004)