Meeting: 1005, Newark, Delaware, SS 4A, Special Session on Asymptotic Behavior of Evolution Equations

1005-34-20 **Toka Diagana*** (tdiagana@howard.edu), Department of Mathematics, Howard University, 2441 6th Street N.W, Washington, DC 20059. *p-Almost Automorphic Solutions to a class of semilinear Differential Equations.* Preliminary report.

We consider the original problem which consists of studying the existence and uniqueness of p-almost automorphic solutions $(1 \leq p < \infty)$to the class of semilinear differential equations of the form

$$u'(t) = Au(t) + f(t, Bu(t)), \quad \forall t \in \mathbb{R}, \qquad (E)$$

where A is the infinitesimal generator of a C_0-semigroup $(T(t))_{t\geq 0}$ acting on a Banach space $\mathbb{X}$, $B : \mathbb{X} \mapsto \mathbb{X}$ is a nonzero bounded linear operator, and $f : \mathbb{R} \times \mathbb{X} \mapsto \mathbb{X}$ is jointly continuous. Under some additional assumptions, the existence and uniqueness of a p-almost automorphic to (E) is obtained. (Received December 30, 2004)