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University, 1700 E. Cold Spring Lane, Bartimore, MD 21251. Stepanov-like Almost Automorphic Solutions of Semilinear Evolution Equations with Deviated Argument.

We consider the existence and uniqueness of a Stepanov-like almost automorphic solution to the autonomous semilinear evolution equations with a deviated argument:

$$u'(t) = Au(t) + f(t, u(t), u[\alpha(t, u(t))]), \ t \in \mathbb{R}$$

where A is the infinitesimal generator of an exponentially stable C_0 -semigroup $\{T(t)\}_{t\geq 0}$ and $f: \mathbb{R} \times X \times X \to X$ satisfies a Lipschitz-type condition with respect to second and third arguments. (Received September 18, 2007)