1107-39-50   **Murat Adivar*** (`murat.adivar@ieu.edu.tr`), Izmir University of Economics, Department of Mathematics, Balcova, 35330 Izmir, Turkey. *A generalized almost periodicity notion for functions on hybrid domains.*

We introduce new periodicity notion, called almost periodicity in shifts, for the functions defined on hybrid domains that are not necessarily (additive) translation invariant. This new approach enables investigation of almost periodic solutions of dynamic systems on a large class of hybrid domains including $\pm\overline{q^{\mathbb{Z}}} := \{\pm q^n : n \in \mathbb{Z} \text{ and } q > 1\} \cup \{0\}$.

We use exponential dichotomy and prove the uniqueness of projector of exponential dichotomy to get some limit results for principal fundamental matrix solutions of the system

$$x^{\Delta}(t) = A(t)x(t), \ x(t_0) = x_0.$$

Using the obtained limit results we implement our constructed theory to system of nonlinear neutral delayed dynamic equations to reveal some sufficient conditions for existence of almost periodic solutions in shifts. Hence, we obtain some new results for the discrete case $\mathbb{T} = \mathbb{Z}$ and extend the existing theory to $q-$difference equations. (Received January 03, 2015)