1114-46-58 **Charles Ejikeme Chidume*** (cchidume@aust.edu.ng), KM 10, Airport Rd. Galadimawa, Abuja, Nigeria, and **Ugo Osisiogu** (uaosisiogu1@yahoo.com), Ebonyi State University, Abakaliki, Abakaliki, Nigeria. *Δ-Convergence Theorems, Application of fixed point technique in developing algorithm for approximating solution of nonlinear equation of Hammerstein-type.* Preliminary report.

Let X be a real normed linear space with dual X^*, $F : X \longrightarrow X^*$ and $K : X^* \longrightarrow X$ be *monotone-type* mappings such that the equation

$$x + KFx = 0 \tag{1}$$

has a solution. It is known that, in general; under this setting, even in a real Hilbert space, KF need not be monotone. Consequently, for arbitrary real normed space E, iterative methods for approximating solutions of

$$u + Au = 0 \tag{2}$$

when $A : E \longrightarrow E$ is of the *accretive-type*, assuming existence, which have been successfully employed for equation (2) are not applicable for equation (1). By defining a new operator A on the Cartesian product $X \times X$ in terms of K and F and using fixed point techniques, a new coupled recursion formula is developed in the original spaces X and X^*. This coupled recursion formula has now proved to be successful for approximating solutions of (1), assuming existence. This recursion formula seems to be the only one now known for approximating solutions of (1). when the operators K and F are either of the accretive-type or of the monotone-type. (Received August 04, 2015)