1020-47-225 **Charles Chidume*** (chidume@ictp.it), International Centre for Theoretical Physics, Trieste, Italy. *Convergence of Iterates to a Common Fixed Point of a Family of Mappings.*

Let E be a real reflexive Banach space with uniformly Gâteaux differentiable norm. Let K be a nonempty closed convex subset of E. Suppose that every nonempty closed convex bounded subset of E has the fixed point property for nonexpansive mappings. Let $T_1, T_2, ..., T_N$ be a family of nonexpansive self mappings of K, with $F := \cap_{i=1}^{N} Fix(T_i) = Fix(T_N T_{N-1} ... T_1) = Fix(T_1 T_N ... T_2) = ... = Fix(T_{N-1} T_{N-2} ... T_1 T_N) \neq \emptyset$. Let $\{\lambda_n\}$ be a sequence in $(0,1)$ satisfying the following conditions: $C1 : \lim \lambda_n = 0$; $C2 : \sum \lambda_n = \infty$. For a fixed $\delta \in (0,1)$, define $S_n : K \to K$ by $S_n x := (1-\delta)x + \delta T_n x, \ \forall \ x \in K$ where $T_n = T_{n mod N}$. For arbitrary fixed $u, x_0 \in K$, let $B := \{x \in K : S_N S_{N-1} ... S_1 x = \gamma x + (1-\gamma)u, \text{for some } \gamma > 1\}$ be bounded and the sequence $\{x_n\}$ be defined iteratively by

$$x_{n+1} = \lambda_{n+1} u + (1-\lambda_{n+1}) S_{n+1} x_n, \ for \ n \geq 0.$$

Assume $lim_{n\to\infty} ||T_n x_n - T_{n+1} x_n|| = 0$. Then, $\{x_n\}$ converges strongly to a common fixed point of the family $T_1, T_2, ..., T_N$. (Received August 28, 2006)