

Abstract

Let X be a uniformly convex and uniformly smooth real Banach space with dual X^* . Let $F : X \rightarrow X^*$ and $K : X^* \rightarrow X$ be continuous monotone operators. Suppose that the Hammerstein equation $u + KFu = 0$ has a solution in X . It is proved that a hybrid-type approximation sequence converges strongly to u^* , where u^* is a solution of the equation $u + KFu = 0$. In our theorems, the operator K or F need not be defined on a compact subset of X and no invertibility assumption is imposed on K .