1106-49-1424 **Behzad Djafari Rouhani*** (behzad@utep.edu), Department of Mathematical Sciences, University of Texas at El Paso, 500 W. University Ave., El Paso, TX 79968, and **Kaleem Raza Kazmi** and **Mohammad Farid**. *Iterative Methods for Generalized Mixed Equilibrium and Fixed Point Problems for Nonexpansive Semigroups in a Hilbert Space.*

We introduce an explicit hybrid relaxed extragradient iterative method to approximate a common solution to a generalized mixed equilibrium problem and fixed point problem for a nonexpansive semigroup in a Hilbert space. Then we prove that the sequence generated by the proposed iterative scheme converges strongly to the common solution of the generalized mixed equilibrium problem and fixed point problem for the nonexpansive semigroup. This common solution is the unique solution of a variational inequality problem, and is the optimality condition for a minimization problem. Our results improve and generalize upon the previously known results in this area. (Received September 12, 2014)