Convergence analysis of solutions to some equilibrium problems

Behzad Djafari Rouhani[1] and Vahid Mohebbi[2*]

[1,2] Department of Mathematical Sciences, University of Texas at El Paso, 500 W. University Avenue, El Paso, Texas 79968, USA.

Abstract. We introduce a proximal-type algorithm to approximate solutions of equilibrium problems, without assuming the monotonicity of the bifunction or the weak continuity of its arguments. We show that the solution set is nonempty if the sequence generated by our algorithm is bounded, and in this case it converges strongly to a solution of the problem. We also present some applications and a numerical experiment to illustrate the effectiveness of the algorithm.

[1]E-mail: [1]behzad@utep.edu, [2]vmohebbi@utep.edu.

*Speaker: Vahid Mohebbi