

Modified subgradient extragradient method for approximating of the system of general equilibrium problem and fixed point problem

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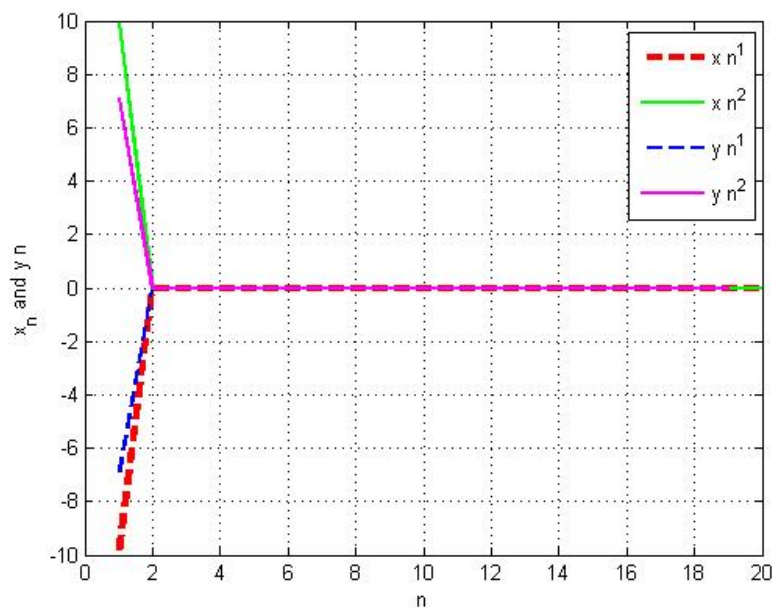
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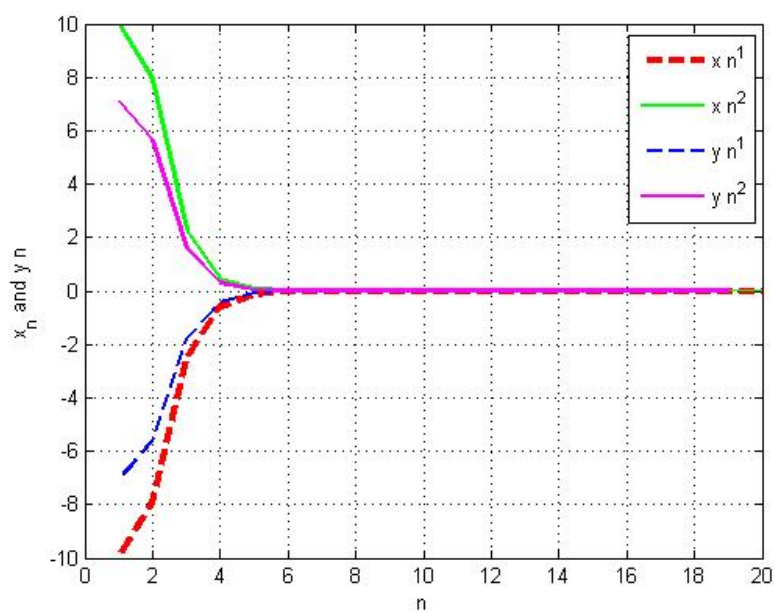
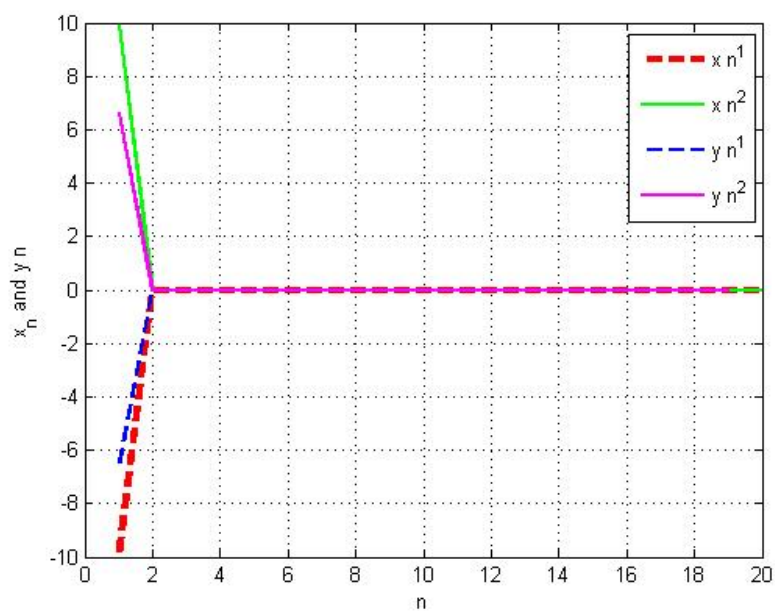
Abstract

In this paper, we introduce the system of general equilibrium problem (SGEP) and new subgradient extragradient by using the concept of the set of solution of the modified variational inequality problem introduced by (missing citation). Then, we establish and prove weak and strong convergence theorem of the new subgradient extragradient algorithm for finding the set of the solutions of the SGEP under some suitable conditions of α_n and β_n with $\alpha_n + \beta_n \leq 1$. Moreover, we apply our main theorem to prove weak and strong convergence theorems for finding solutions of the generalized equilibrium problem, the system of equilibrium problem, the variational inequality problem and the general system of variational inequality problem. In the last section, we give three numerical examples to support our main result.

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References