

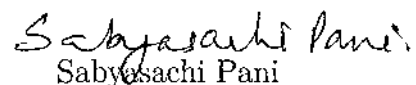
Abstract

In this thesis, we study the generalizations of variational inequalities and complementarity problems and establish some existence theorems under most general conditions in different contexts.

We establish the existence of complementarity problem using the existence results established in the paper of J Yao. Yao has established a variational inequality which is the generalized one having no monotone condition on the operator. With that variational inequality we have established a complementarity problem under two different conditions. We have studied the General equilibrium of exchange economics and established the solution of Walrasian equilibrium by complementarity problem. We have studied the *Generalized Variational Inequalities and Complementarity Problems* and established some results on that and also shown the equivalence of variational inequality and complementarity problem. Also variational inequalities and complementarity problems have been studied for *Topological Vector Spaces, Random Operators* and *Fuzzy Mappings*.

Finally we have given the conclusion and mentioned some problems for future research.

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