Abstract

In this thesis, we define property $(W.P.)$ and $(W.P.)^*$ and establish some coincidence point theorems for multivalued generalized I-contraction and generalized I-nonexpansive mappings by using property $(W.P.)$ and $(W.P.)^*$. Afterwards we establish some common fixed point theorems for multivalued generalized I-contraction and generalized I-nonexpansive mappings without assumption that I is T-weakly commuting at some $v \in C(I, T)$. Several invariant approximations results are obtained as applications. Finally, random coincidence point and common random fixed point results are also proved. Our theorems in this thesis generalize and extend the Banach Contraction Principle, Nadler's Contraction Principle and several theorems of many authors.