



<b>Thesis Title</b>	Convergence Theorems for Families of Nonexpansive Mappings and Nonspreading Mappings and Equilibrium Problems	
<b>Author</b>	Miss Urailuk Singthong	
<b>Degree</b>	Doctor of Philosophy (Mathematics)	
<b>Thesis Advisory Committee</b>	Prof. Dr. Suthep Suantai	Advisor
	Prof. Dr. Sompong Dhompongsa	Co-advisor
	Asst. Prof. Dr. Bancha Panyanak	Co-advisor

### ABSTRACT

The purpose of this thesis first is to prove a strong convergence theorem of a new general iterative method by using the  $K$ -mapping for finding a common fixed point of a finite family of nonexpansive mappings in Hilbert spaces. We then introduce an iterative method for finding a common fixed point of a countable family of nonexpansive mappings in a Banach space and we prove a strong convergence theorem of the proposed method in both uniformly smooth Banach space and reflexive strictly convex Banach space with a uniformly Gâteaux differential norm. We also introduce and prove a strong convergence theorem of an iterative method for finding a common fixed point of two nonspreading-type mappings in Hilbert spaces. Finally, we prove strong convergence theorems of two iterative methods for finding a common element of a nonspreading-type mapping and equilibrium problem in Hilbert spaces.

All rights reserved