

A Unification of Generalized Fan-Browder Type Alternatives

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Abstract

In our previous works, we obtained some characterizations of (partial) KKM spaces. In the present paper, we begin with a modification of a such characterization using a general Fan-Browder type fixed point property and show that this characterization implies an alternative theorem. This theorem unifies and contains a number of historically well-known important fixed point or maximal element theorems. We list some of them chronologically and gave simple proofs. Finally, we introduce some recent works related to the generalized Fan-Browder type alternatives.

Key words and phrases: Abstract convex space; (Partial) KKM space; Fixed point; Coincidence point; Maximal element.