

**Nashine, Hemant Kumar; Ibrahim, Rabha W.; Rhoades, B. E.; Pant, Rajendra**  
**Unified Feng-Liu type fixed point theorems solving control problems.** (English) Zbl 07273574  
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Summary: The propose of this work is to study unified Feng-Liu type fixed point theorems using  $(\alpha, \eta)$ -muti-valued admissible mappings with more general contraction condition in complete metric spaces. The obtained results generalize and improve several existing theorems in the literature. We use these results in metric spaces endowed with binary relations and partially ordered sets. Some non-trivial example have been presented to illustrate facts and show genuineness of our work. At the end, the established results will be used to obtain existence solutions for a fractional-type integral inclusion.

**MSC:**

**47H10** Fixed-point theorems

**54H25** Fixed-point and coincidence theorems (topological aspects)

**Keywords:**

fixed point; muti-valued mapping; fractional integral inclusion

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