

# Nonlinear Fredholm Integral Equation via Fixed Point Theorems on Convex Contraction in Multiplicative Metric Spaces

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## ABSTRACT

This paper introduces the notion of a multiplicative convex contraction mapping and provides the proof of several fixed-point theorems within the framework of multiplicative metric spaces. To illustrate the practical significance of our primary findings, we include an illustrative example. Furthermore, we employ our results to investigate both the existence and uniqueness of solutions for nonlinear fredholm integral equation.

**Keywords:**  $\alpha$  –admissible mappings, Multiplicative convex contraction, Nonlinear Fredholm integral equation

