
A NEW APPROACH TO FIXED POINT THEORY FOR SIMULATION FUNCTIONS IN SUPRAMETRIC SPACES

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ABSTRACT

In this talk, we will extend the concept of simulation functions and Z -contractions to the framework of suprametric spaces. Suprametric spaces generalize the classical notion of metric spaces by relaxing or modifying certain axioms, providing a more flexible structure for fixed point theory. We will introduce the notion of suprametric Z -contractions and investigate the existence and uniqueness of fixed points for such mappings. To illustrate the validity and effectiveness of our theoretical results, I will present a concrete example in a suprametric space that does not necessarily satisfy the standard triangle inequality. Finally, we will demonstrate how our results unify and generalize several existing fixed point theorems in the literature, bridging the gap between simulation functions and generalized metric structures.

Keywords Suprametric Spaces · Simulation Functions · Fixed Point Theory

References

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