

Contents

Preface	vii
1 Introduction	1
1.1 A description of probabilistic metric spaces	4
1.2 A description of generalized Menger spaces	9
1.3 A description of fuzzy metric spaces	11
1.4 Development of fixed point theory in probabilistic metric spaces	14
1.5 Development of fixed point theory in fuzzy metric spaces	17
2 Probabilistic contraction under a control function	21
2.1 Introduction	21
2.2 Preliminaries	22
2.3 Main results	23
2.4 Illustrations	32
3 Fixed points for φ-contraction in Menger PGM-spaces	35
3.1 Introduction	35
3.2 Preliminaries	36
3.3 Main Results	38
4 Fixed points for $(\varphi\text{-}\psi)$-weak contractions in fuzzy and Menger spaces	51
4.1 Introduction	51
4.2 A theorem in Menger spaces	52
4.3 A theorem in fuzzy metric spaces	59
5 On Hicks' contraction using a control function	67
5.1 Introduction and Preliminaries	67
5.2 Main results	69
6 Conclusion and future scope	75