

Metric Spaces Of Fuzzy Sets Theory And Applications

Fuzzy Logic: State of the Art covers a wide range of both theory and applications of fuzzy sets, ranging from mathematical basics, through artificial intelligence, computer management and systems science to engineering applications. Fuzzy Logic will be of interest to researchers working in fuzzy set theory and its applications.

"Neutrosophic Sets and Systems" has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc. Some articles in this issue: n-Refined Neutrosophic Modules, A Neutrosophic Approach to Digital Images, A Novel Method for Neutrosophic Assignment Problem by using Interval-Valued Trapezoidal Neutrosophic Number.

This book is a printed edition of the Special Issue "Fuzzy Mathematics" that was published in Mathematics Neutrosophic Sets and Systems (NSS) is an academic journal, published quarterly online and on paper, that has been created for publications of advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics etc. and their applications in any field.

Metric Spaces of Fuzzy Sets

On Neutrosophic Soft Metric Space

Background and Recent Developments of Metric Fixed Point Theory

Logic, Topology, and Measure Theory

A Modern Introduction to Fuzzy Mathematics

Recent Advances in Intuitionistic Fuzzy Logic Systems and Mathematics

The concept of fuzzy sets and fuzzy logic was introduced by Professor Lofti A Zadeh in 1965. The success of research in fuzzy sets and fuzzy logic has been demonstrated in a variety of fields, such as artificial intelligence, computer science, control engineering, computer applications, robotics and many more. In the book we adopt the notion of fuzzy metric space due to George and Veeramani [14] which is a modification of the notion of fuzzy metric space as studied by Kramosil and Michalek [29]. The notion of fuzzy metric space by George and Veeramani has many advantages in analysis as many notions and results from classical metric spaces can be extended and generalized to the setting of fuzzy metric spaces, for instance: the notion of completeness, completion of spaces as well as extension of maps

Fuzzy Intelligent Systems: Methodologies, Techniques and Applications comprises state-of-the-art chapters detailing how expert systems are built and the fuzzy logic resembling human reasoning powering them. Hybrid and neuro-fuzzy intelligent systems are discussed along with Evolutionary and, in particular, Genetic Algorithms. This approach has been extended by using Multiobjective Evolutionary Algorithms, which can consider multiple conflicting objectives instead of a single one. The book also discusses the hybridization between Multiobjective Evolutionary Algorithms and Fuzzy Systems which is known as Multiobjective Evolutionary Fuzzy Systems.

The intention of this paper is to give the general definition of cone metric space in the context of the neutrosophic theory. In this relation, we obtain some fundamental results concerning fixed points for weakly compatible mapping.

Fuzzy Sets and Their Applications to Cognitive and Decision Processes contains the proceedings of the U.S.-Japan Seminar on Fuzzy Sets and Their Applications, held at the University of California in Berkeley, California, on July 1-4, 1974. The seminar provided a forum for discussing a broad spectrum of topics related to the theory of fuzzy sets, ranging from its mathematical aspects to applications in human cognition, communication, decision making, and engineering systems analysis. Comprised of 19 chapters, this book begins with an introduction to the calculus of fuzzy restrictions, followed by a discussion on fuzzy programs and their execution. Subsequent chapters focus on fuzzy relations, fuzzy graphs, and their applications to clustering analysis; risk and decision making in a fuzzy environment; fractionally fuzzy grammars and their application to pattern recognition; and applications of fuzzy sets in psychology. An approach to pattern recognition and associative memories using fuzzy logic is also described. This monograph will be of interest to students and practitioners in the fields of computer science, engineering, psychology, and applied mathematics.

A Study of Fixed Point Theorems in Fuzzy Metric Space

Proceedings of the U.S.-Japan Seminar on Fuzzy Sets and Their Applications, Held at the University of California, Berkeley, California, July 1-4, 1974

Fuzzy Information and Engineering

AMAT, Ankara, May 2015 Selected Contributions

Theory and Applications

In Honour of Manuel López-Pellicer Mathematical Work, Elche, Spain, June 7-8, 2018

In this paper, the notion of neutrosophic soft metric space(NSMS) is introduced in terms of neutrosophic soft points and several related properties, structural characteristics have been investigated. Then the convergence of sequence in neutrosophic soft metric space is defined and illustrated by examples.

This book provides an overview of the state-of-the-art in both the theory and methods of intuitionistic fuzzy logic, partial differential equations and numerical methods in informatics. Covering topics such as fuzzy intuitionistic Hilbert spaces, intuitionistic fuzzy differential equations, fuzzy intuitionistic metric spaces, and numerical methods for differential equations, it discusses applications such as fuzzy real-time scheduling, intelligent control, diagnostics and time series prediction. The book features selected contributions presented at the 6th international congress of the Moroccan Applied Mathematics Society, which took place at Sultan Moulay Slimane University Beni Mellal, Morocco, from 7 to 9 November 2019.

"This book imparts latest developments in various properties of fuzzy topology viz., fuzzy set theory, fuzzy point and its neighbourhood structure, Fuzzy nets and Fuzzy convergence, Fuzzy metric, Different fuzzy compactness, Fuzzy connectedness, Fuzzy separation axioms and properties, Product spaces, Convex fuzzy sets and Fuzzy uniform

spaces."--BOOK JACKET.

This book focusing on Metric fixed point theory is designed to provide an extensive understanding of the topic with the latest updates. It provides a good source of references, open questions and new approaches. While the book is principally addressed to graduate students, it is also intended to be useful to mathematicians, both pure and applied.

Neutrosophic Sets and Systems. An International Journal in Information Science and Engineering, Vol. 36, 2020

Topological and Geometric KM-Single Valued Neutrosophic Metric Spaces

Mathematics of Fuzzy Sets

Proceedings of the Workshop in Applied Topology WiAT'12

Fixed Point Theorems On Fuzzy Metric Space

It is an indisputable argument that the formulation of metrics (by Fréchet in the early 1900s) opened a new subject in mathematics called non-linear analysis after the appearance of Banach's fixed point theorem. Because the underlying space of this theorem is a metric space, the theory that developed following its publication is known as metric fixed point theory. It is well known that metric fixed point theory provides essential tools for solving problems arising in various branches of mathematics and other sciences such as split feasibility problems, variational inequality problems, non-linear optimization problems, equilibrium problems, selection and matching problems, and problems of proving the existence of solutions of integral and differential equations are closely related to fixed point theory. For this reason, many people over the past seventy years have tried to generalize the definition of metric space and corresponding fixed point theory. This trend still continues. A few questions lying at the heart of the theory remain open and there are many unanswered questions regarding the limits to which the theory may be extended. Metric Structures and Fixed Point Theory provides an extensive understanding and the latest updates on the subject. The book not only shows diversified aspects of popular generalizations of metric spaces such as symmetric, b-metric, w-distance, G-metric, modular metric, probabilistic metric, fuzzy metric, graphical metric and corresponding fixed point theory but also motivates work on existing open problems on the subject. Each of the nine chapters—contributed by various authors—contains an Introduction section which summarizes the material needed to read the chapter independently of the others and contains the necessary background, several examples, and comprehensive literature to comprehend the concepts presented therein. This is helpful for those who want to pursue their research career in metric fixed point theory and its related areas. Features Explores the latest research and developments in fixed point theory on the most popular generalizations of metric spaces Description of various generalizations of metric spaces Very new topics on fixed point theory in graphical and modular metric spaces Enriched with examples and open problems This book serves as a reference for scientific investigators who need to analyze a simple and direct presentation of the fundamentals of the theory of metric fixed points. It may also be used as a text book for postgraduate and research students who are trying to derive future research scope in this area.

This book aims at providing an overview of state-of-the-art in both the theory and methods of intuitionistic fuzzy logic, partial differential equations and numerical methods in informatics. It covers topics such as fuzzy intuitionistic Hilbert spaces, intuitionistic fuzzy differential equations, fuzzy intuitionistic metric spaces, and numerical methods for differential equations. It reports on applications such as fuzzy real time scheduling, intelligent control, diagnostics and time series prediction. Chapters were carefully selected among contributions presented at the second edition of the International Conference on Intuitionistic Fuzzy Sets and Mathematical Science, ICIFSMAS, held on April 11-13, 2018, at Al Akhawayn University of Ifrane, in Morocco.

En las últimas décadas, la Topología se ha revelado como una poderosa herramienta para acometer diferentes problemas relacionados con un amplio espectro de ciencias aplicadas más allá de las matemáticas, como Economía, Inteligencia Artificial, Ciencias de la Computación o Sistemas Dinámicos. El presente volumen recoge las ponencias del Workshop in Applied Topology WiAT₁₂, celebrado en junio de 2012 en la Universitat Jaume I, en el que participaron diferentes grupos de investigación del área de la Topología General y sus Aplicaciones.

The Second International Conference on Fuzzy Information and Engineering (ICFIE2007) is a major symposium for scientists, engineers and practitioners in China as well as the world to present their latest results, ideas, developments and applications in all areas of fuzzy information and knowledge engineering. It aims to strengthen relations between industry research laboratories and universities, and to create a primary symposium for world scientists.

Fixed Point Theory in Probabilistic Metric Spaces

Investigations Into Living Systems, Artificial Life, and Real-world Solutions

Mathematical Communications

Computational Analysis

Proceedings of the Second International Conference of Fuzzy Information and Engineering (ICFIE)

Metric Structures and Fixed Point Theory

This book is the result of a meeting on Topology and Functional Analysis, and is dedicated to Professor Manuel López-Pellicer's mathematical research. Covering topics in descriptive topology and functional analysis, including topological groups and Banach space theory, fuzzy topology, differentiability and renorming, tensor products of Banach spaces and aspects of Cp-theory, this volume is particularly useful to young researchers wanting to learn about the latest developments in these areas.

This book provides a timely and comprehensive overview of current theories and methods in fuzzy logic, as well as relevant applications in a variety of fields of science and technology. Dedicated to Lotfi A. Zadeh on his one year death anniversary, the book goes beyond a pure commemorative text. Yet, it offers a fresh perspective on a number of relevant topics, such as computing with words, theory of perceptions, possibility theory, and decision-making in a fuzzy

environment. Written by Zadeh ' s closest colleagues and friends, the different chapters are intended both as a timely reference guide and a source of inspiration for scientists, developers and researchers who have been dealing with fuzzy sets or would like to learn more about their potential for their future research.

This book constitutes the proceedings of the 9th International Conference on Bio-inspired Computing: Theories and Applications, BIC-TA 2014, held in Wuhan, China, in October 2014. The 109 revised full papers presented were carefully reviewed and selected from 204 submissions. The papers focus on four main topics, namely evolutionary computing, neural computing, DNA computing, and membrane computing.

This paper introduces the novel concept of KM-single valued neutrosophic metric spaces as an especial generalization of KM-fuzzy metric spaces, investigates several topological and structural properties and presents some of its applications. This study also considers the metric spaces and constructs KM-single valued neutrosophic spaces with respect to any given triangular norms and triangular conorms.

9th International Conference, BIC-TA 2014, Wuhan, China, October 16-19, 2014, Proceedings

New Trends in Fuzzy Set Theory and Related Items

Fixed Point Results for Contraction Theorems in Neutrosophic Metric Spaces

Fuzzy Intelligent Systems

Neutrosophic Sets and Systems, Vol. 36, 2020

Scientia Magna, Vol. 7, No. 2, 2011

Fixed point theory in probabilistic metric spaces can be considered as a part of Probabilistic Analysis, which is a very dynamic area of mathematical research. A primary aim of this monograph is to stimulate interest among scientists and students in this fascinating field. The text is self-contained for a reader with a modest knowledge of the metric fixed point theory. Several themes run through this book. The first is the theory of triangular norms (t-norms), which is closely related to fixed point theory in probabilistic metric spaces. Its recent development has had a strong influence upon the fixed point theory in probabilistic metric spaces. In Chapter 1 some basic properties of t-norms are presented and several special classes of t-norms are investigated. Chapter 2 is an overview of some basic definitions and examples from the theory of probabilistic metric spaces. Chapters 3, 4, and 5 deal with some single-valued and multi-valued probabilistic versions of the Banach contraction principle. In Chapter 6, some basic results in locally convex topological vector spaces are used and applied to fixed point theory in vector spaces. Audience: The book will be of value to graduate students, researchers, and applied mathematicians working in nonlinear analysis and probabilistic metric spaces.

Mathematics of Fuzzy Sets: Logic, Topology and Measure Theory is a major attempt to provide much-needed coherence

for the mathematics of fuzzy sets. Much of this book is new material required to standardize this mathematics, making this volume a reference tool with broad appeal as well as a platform for future research. Fourteen chapters are organized into three parts: mathematical logic and foundations (Chapters 1-2), general topology (Chapters 3-10), and measure and probability theory (Chapters 11-14). Chapter 1 deals with non-classical logics and their syntactic and semantic foundations. Chapter 2 details the lattice-theoretic foundations of image and preimage powerset operators. Chapters 3 and 4 lay down the axiomatic and categorical foundations of general topology using lattice-valued mappings as a fundamental tool. Chapter 3 focuses on the fixed-basis case, including a convergence theory demonstrating the utility of the underlying axioms. Chapter 4 focuses on the more general variable-basis case, providing a categorical unification of locales, fixed-basis topological spaces, and variable-basis compactifications. Chapter 5 relates lattice-valued topologies to probabilistic topological spaces and fuzzy neighborhood spaces. Chapter 6 investigates the important role of separation axioms in lattice-valued topology from the perspective of space embedding and mapping extension problems, while Chapter 7 examines separation axioms from the perspective of Stone-Cech-compactification and Stone-representation theorems. Chapters 8 and 9 introduce the most important concepts and properties of uniformities, including the covering and entourage approaches and the basic theory of precompact or complete $[0, 1]$ -valued uniform spaces. Chapter 10 sets out the algebraic, topological, and uniform structures of the fundamentally important fuzzy real line and fuzzy unit interval. Chapter 11 lays the foundations of generalized measure theory and representation by Markov kernels. Chapter 12 develops the important theory of conditioning operators with applications to measure-free conditioning. Chapter 13 presents elements of pseudo-analysis with applications to the Hamilton–Jacobi equation and optimization problems. Chapter 14 surveys briefly the fundamentals of fuzzy random variables which are $[0, 1]$ -valued interpretations of random sets.

Provides readers with the foundations of fuzzy mathematics as well as more advanced topics A Modern Introduction to Fuzzy Mathematics provides a concise presentation of fuzzy mathematics., moving from proofs of important results to more advanced topics, like fuzzy algebras, fuzzy graph theory, and fuzzy topologies. The authors take the reader through the development of the field of fuzzy mathematics, starting with the publication in 1965 of Lotfi Asker Zadeh's seminal paper, Fuzzy Sets. The book begins with the basics of fuzzy mathematics before moving on to more complex topics, including: Fuzzy sets Fuzzy numbers Fuzzy relations Possibility theory Fuzzy abstract algebra And more Perfect for advanced undergraduate students, graduate students, and researchers with an interest in the field of fuzzy mathematics, A Modern Introduction to Fuzzy Mathematics walks through both foundational concepts and cutting-edge, new mathematics in the field.

For representing several real problems, we used to use the concepts of sets and functions in twentieth century. This way of representing problems is more rigid. In many circumstances the solutions using these concepts becomes meaningless. To overcome such type difficulties, at present fuzzy concept is used and tried to apply at every corner of science, technology, social science, etc. Almost all Mathematical, Engineering, Medicine, etc. concepts have been redefined using fuzzy sets. This leads us to make this book. In this monograph, we have tried to explore different type of fixed point theorems in fuzzy metric spaces. Fuzzy metric space is generalized concept of metric space. There are so many concepts of metric space remain to be generalized in fuzzy metric space. That's why, at the end of each chapter, we have suggested different type of open problems. Fixed point theorem has different application in our social sciences, biological sciences, etc. That's why, we have made an attempt to write this book. Fuzzy symmetric metric space is introduced here; because it is a challenging problem to establish the concepts of mathematical analysis without using triangular inequality.

Probabilistic Metric Spaces

Descriptive Topology and Functional Analysis II

An Introduction to Metric Spaces

Methodologies, Techniques, and Applications

FUZZY SOFT METRIC SPACE

Recent Developments in Fuzzy Logic and Fuzzy Sets

Featuring the clearly presented and expertly-refereed contributions of leading researchers in the field of approximation theory, this volume is a collection of the best contributions at the Third International Conference on Applied Mathematics and Approximation Theory, an international conference held at TOBB University of Economics and Technology in Ankara, Turkey, on May 28-31, 2015. The goal of the conference, and this volume, is to bring together key work from researchers in all areas of approximation theory, covering topics such as ODEs, PDEs, difference equations, applied analysis, computational analysis, signal theory, positive operators, statistical approximation, fuzzy approximation, fractional analysis, semigroups, inequalities, special functions and summability. These topics are presented both within their traditional context of approximation theory, while also focusing on their connections to applied mathematics. As a result, this collection will be an invaluable resource for researchers in applied mathematics, engineering and statistics.

This book is a printed edition of the Special Issue "New Trends in Fuzzy Set Theory and Related Items" that was published in Axioms

This book collects papers on major topics in fixed point theory and its applications. Each chapter is accompanied by basic notions, mathematical preliminaries and proofs of the main results. The book

discusses common fixed point theory, convergence theorems, split variational inclusion problems and fixed point problems for asymptotically nonexpansive semigroups; fixed point property and almost fixed point property in digital spaces, nonexpansive semigroups over $CAT(\kappa)$ spaces, measures of noncompactness, integral equations, the study of fixed points that are zeros of a given function, best proximity point theory, monotone mappings in modular function spaces, fuzzy contractive mappings, ordered hyperbolic metric spaces, generalized contractions in b -metric spaces, multi-tupled fixed points, functional equations in dynamic programming and Picard operators. This book addresses the mathematical community working with methods and tools of nonlinear analysis. It also serves as a reference, source for examples and new approaches associated with fixed point theory and its applications for a wide audience including graduate students and researchers.

Metric Spaces of Fuzzy Sets Theory and Applications World Scientific

Fuzzy Logic

Advances in Metric Fixed Point Theory and Applications

Fuzzy Sets, Rough Sets and Multivalued Operations and Applications

Fuzzy Operator Theory in Mathematical Analysis

Fuzzy Sets and Their Applications to Cognitive and Decision Processes

Compactness and Continuity On Neutrosophic Soft Metric Space

This self-contained monograph presents an overview of fuzzy operator theory in mathematical analysis. Concepts, principles, methods, techniques, and applications of fuzzy operator theory are unified in this book to provide an introduction to graduate students and researchers in mathematics, applied sciences, physics, engineering, optimization and operations research. New approaches to fuzzy operator theory and fixed point theory with applications to fuzzy metric spaces, fuzzy normed spaces, partially ordered fuzzy metric spaces, fuzzy normed algebras, and non-Archimedean fuzzy metric spaces are presented. Surveys are provided on: Basic theory of fuzzy metric and normed spaces and its topology, fuzzy normed and Banach spaces, linear operators, fundamental theorems (open mapping and closed graph), applications of contractions and fixed point theory, approximation theory and best proximity theory, metric type space, topology and applications.

This book serves as a textbook for an introductory course in metric spaces for undergraduate or graduate students. The goal is to present the basics of metric spaces in a natural and intuitive way and encourage students to think geometrically while actively participating in the learning of this subject. In this book, the authors illustrated the strategy of the proof of various theorems that motivate readers to complete them on their own. Bits of pertinent history are infused in the text, including brief biographies of some of the central players in the development of metric spaces. The textbook is divided

into seven chapters that contain the main materials on metric spaces; namely, introductory concepts, completeness, compactness, connectedness, continuous functions and metric fixed point theorems with applications. Some of the noteworthy features of this book include · Diagrammatic illustrations that encourage readers to think geometrically. Focus on systematic strategy to generate ideas for the proofs of theorems · A wealth of remarks, observations along with a variety of exercises · Historical notes and brief biographies appearing throughout the text

The primary aim of the book is to provide a systematic development of the theory of metric spaces of normal, upper semicontinuous fuzzy convex fuzzy sets with compact support sets, mainly on the base space X . An additional aim is to sketch selected applications in which these metric space results and methods are essential for a thorough mathematical analysis. This book is distinctly mathematical in its orientation and style, in contrast with many of the other books now available on fuzzy sets, which, although all making use of mathematical formalism to some extent, are essentially motivated by and oriented towards more immediate applications and related practical issues. The reader is assumed to have some previous undergraduate level acquaintance with metric spaces and elementary functional analysis.

"This book provides original research on the theoretical and applied aspects of artificial life, as well as addresses scientific, psychological, and social issues of synthetic life-like behavior and abilities"--Provided by publisher.

Fuzzy Mathematics

Dedicated to Lotfi A. Zadeh

Bio-inspired Computing: Theories and Applications

Fuzzy Topology

Theoretical Aspects and Applications

Recent Advances in Intuitionistic Fuzzy Logic Systems

Papers on Smarandache adjacent number sequences and its asymptotic property, counterexamples to a theorem concerning solution of certain quadratic Diophantine equation, short interval result for the e -squarefree e -divisor function, log convexity and concavity of some double sequences, intuitionistic fuzzy resolvable and intuitionistic fuzzy irresolvable spaces, super Weyl transform and some of its properties, and similar topics. Contributors: S. Panayappan, J. Wei, S. Chauhan, S. Kumar, S. Keawrahun, U. Leerawat, S. Balasubramanian, P. A. S. Vyjayanthi, S. Balasubramanian, and others.

In this article, we present fixed and common fixed point results for Banach and Edelstein contraction theorems in neutrosophic metric spaces. Then some properties and examples are given for neutrosophic metric spaces. Thus, we added a new path in neutrosophic theory to obtain fixed point results. We investigate and prove some contraction theorems that are extended to neutrosophic metric space with the

assistance of Grabiec.

In this paper, the notion of compact neutrosophic soft metric space is introduced. The concept of neutrosophic soft function and the composition of functions in a neutrosophic soft metric space along with suitable examples also have been brought. The continuity and uniform continuity of a neutrosophic soft function in this space have been defined and verified by proper examples. Several related properties, theorems and structural characteristics of these have been investigated here.

The various uncertainties arise in complicated problems in Economics, Engineering, Environmental Science, Medical Science and Social Science. The methods of classical Mathematics may not be successfully used to solve them. Mathematical theories such as probability theory, fuzzy set theory and rough set theory were established by researchers to model uncertainties appearing in the above fields. But all these theories have their own difficulties. To overcome these difficulties, In 1999 Molodstov[7] introduced the concept of soft set as a new mathematical tool for dealing with uncertainties. As the problem of setting the membership function does not arise in soft set theory, it can be easily applied to many different fields. In 2003, Maji.et.al.[5] studied some operations on the soft set theory. In 2009, M.I.Ali et.al.[1] studied some new operations on soft sets and its applications. In 2013, Sujoy Das et.al.[11] proposed soft metric space. In 2015, Thangaraj Beaula et.al.,[12] established the fuzzy soft metric spaces. In chapter 1, the basic definitions, examples, properties and theorems are given which are used for throughout the dissertation. In chapter 2, we defined Fuzzy soft metric space with suitable illustrations. We proved arbitrary union of fuzzy soft open set is fuzzy soft open set and the intersection of finite number of fuzzy soft open set is fuzzy soft open set. In chapter 3, Cauchy sequence are defined. First category, second category, dense, nowhere dense are all defined with suitable illustrations. We established Cantor intersection theorem on complete fuzzy soft metric space and also we proved Baires category theorem on fuzzy soft metric space. In chapter 4, fuzzy soft open cover, fuzzy soft compact set and fuzzy soft totally bounded set are defined. We proved some important theorems. Also we defined Bolzano Weirstrass property and based on this we proved theorem namely fuzzy soft metric space becomes fuzzy soft sequentially compact if and only if fuzzy soft metric space has the property Bolzano Weirstrass. In chapter 5, we defined convex fuzzy soft metric space. Also we defined self mapping, fixed point and convergence of convex fuzzy soft metric space. Using these all we proved fixed point theorem on convex fuzzy soft metric space.

Neutrosophic Fixed Point Theorems and Cone Metric Spaces

State of the Art

*Applied topology: recent progress for computer science, fuzzy mathematics and economics.
international book series*

This distinctly nonclassical treatment focuses on developing aspects that differ from the theory of ordinary metric spaces, working directly with probability distribution functions rather than random variables. The two-part treatment begins with an overview that discusses the theory's historical evolution, followed by a development of related mathematical machinery. The presentation defines all needed concepts, states all necessary results, and provides relevant proofs. The second part opens with definitions of probabilistic metric spaces and proceeds to examinations of special classes of probabilistic metric spaces, topologies, and several related structures, such as probabilistic normed and inner-product spaces. Throughout, the authors focus on developing aspects that differ from the theory of ordinary metric spaces, rather than simply transferring known metric space results to a more general setting.