Generalized N Fuzzy Ideals In Semigroups

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Fuzzy Lie Algebras Muhammad Akram 2018-12-30
This book explores certain structures of fuzzy Lie algebras, fuzzy Lie superalgebras and fuzzy n-Lie algebras. In addition, it applies various concepts to Lie algebras and Lie superalgebras, including type-1 fuzzy sets, interval-valued fuzzy sets, intuitionistic fuzzy sets, interval-valued intuitionistic fuzzy sets, vague sets and bipolar fuzzy sets. The book offers a valuable resource for students and researchers in mathematics, especially those interested in fuzzy Lie algebraic structures, as well as for other scientists. Divided into 10 chapters, the book begins with a concise review of fuzzy set theory, Lie algebras and Lie superalgebras. In turn, Chap. 2 discusses several properties of concepts like interval-valued fuzzy Lie ideals, characterizations of Noetherian Lie algebras, quotient Lie algebras via interval-valued fuzzy Lie ideals, and interval-valued fuzzy Lie superalgebras. Chaps. 3 and 4 focus on various concepts of fuzzy Lie algebras, while Chap. 5 presents the concept of fuzzy Lie ideals of a Lie algebra over a fuzzy field. Chapter 6 is devoted to the properties of bipolar fuzzy Lie ideals, bipolar fuzzy Lie subsuperalgebras, bipolar fuzzy bracket product, solvable bipolar fuzzy Lie ideals and nilpotent bipolar fuzzy Lie ideals. Chap. 7 deals with the properties of m-polar fuzzy Lie subalgebras and m-polar fuzzy Lie ideals, while Chap. 8 addresses concepts like soft intersection Lie algebras and fuzzy soft Lie algebras. Chap. 9 deals with rough fuzzy Lie subalgebras and rough fuzzy Lie ideals, and lastly, Chap. 10 investigates certain properties of fuzzy subalgebras and ideals of n-ary Lie algebras.

Neutrosophic 𝒩−interior ideals in semigroups - K. Porselvi 2020-10-01
We define the concepts of neutrosophic 𝒩 -interior ideal and neutrosophic 𝒩 −characteristic interior ideal structures of a semigroup. We infer different types of semigroups using neutrosophic 𝒩-interior ideal structures. We also show that the intersection of neutrosophic 𝒩-interior ideals and the union of neutrosophic 𝒩-interior ideals is also a neutrosophic 𝒩-interior ideal.

Fuzzy Abel Grassmann Groupoids - Madad Khan 2015-01-15

Fuzzy Semigroups - John N. Mordeson 2003-07-10
The purpose of this book is to present an up to date account of fuzzy subsemigroups and fuzzy ideals of a semigroup. The book concentrates on theoretical aspects, but also includes applications in the areas of fuzzy coding theory, fuzzy finite state machines, and fuzzy languages. Basic results on fuzzy subsets, semigroups, codes, finite state machines, and languages are reviewed and introduced, as well as certain fuzzy ideals of a semigroup and advanced characterizations and properties of fuzzy semigroups.

International Conference on Oriental Thinking and Fuzzy Logic - Bing-Yuan Cao 2016-06-18
This proceedings book presents edited results of the eighth International Conference on Fuzzy Information and Engineering (ICFIE'2015) and on Oriental Thinking and Fuzzy Logic, in August 17-20, 2015, in Dalian, China. The book contains 65 high-quality papers and is divided into six main parts: "Fuzzy Information Processing", "Fuzzy Engineering", "Internet and Big Data Applications", "Factor Space and Factorial Neural Networks", "Information Granulation and Granular Computing" as well as "Extenics and Innovation Methods".

A Generalized Approach towards Soft Expert Sets via Neutrosophic Cubic Sets with Applications in Games - Muhammad Gulistan
Games are considered to be the most attractive and healthy event between nations and peoples. Soft expert

sets are helpful for capturing uncertain and vague information. By contrast, neutrosophic set is a tri-component logic set, thus it can deal with uncertain, indeterminate, and incompatible information where the indeterminacy is quantified explicitly and truth membership, indeterminacy membership, and falsity membership independent of each other.

Quasi-ideals in Rings and Semigroups - Ottó Steinfeld 1978

Neutrosophic 𝒩 −bi-ideals in semigroups - K. Porselvi
In this paper, we introduce the notion of neutrosophic 𝒩-bi-ideal for a semigroup. We infer different semigroups using neutrosophic 𝒩 -bi-ideal structures. Moreover, for regular semigroups, neutrosophic 𝒩-product and intersection of neutrosophic 𝒩-ideals are identical.

Fuzzy Semigroups - John N. Mordeson 2012-11-03
Lotfi Zadeh introduced the notion of a fuzzy subset of a set in 1965. Ris seminal paper has opened up new insights and applications in a wide range of scientific fields. Azriel Rosenfeld used the notion of a fuzzy subset to put forth cornerstone papers in several areas of mathematics, among other discplines. Rosenfeld is the father of fuzzy abstract algebra. Kuroki is re sponsible for much of fuzzy ideal theory of semigroups. Others who worked on fuzzy semigroup theory, such as Xie, are mentioned in the bibliogra phy. The purpose of this book is to present an up to date account of fuzzy subsemigroups and fuzzy ideals of a semigroup. We concentrate mainly on theoretical aspects, but we do include applications. The applications are in the areas of fuzzy coding theory, fuzzy finite state machines, and fuzzy languages. An extensive account of fuzzy automata and fuzzy languages is given in [100]. Consequently, we only consider results in these areas that have not appeared in [100] and that pertain to semigroups. In Chapter 1, we review some basic results on fuzzy subsets, semigroups, codes, finite state machines, and languages. The purpose of this chapter is to present basic results that are needed in the remainder of the book. In Chapter 2, we introduce certain fuzzy ideals of a semigroup, namely, fuzzy two-sided ideals, fuzzy bi-ideals, fuzzy interior ideals, fuzzy quasi ideals, and fuzzy generalized bi-ideals.

Neutrosophic Sets and Systems, Vol. 41, 2021 - Florentin Smarandache
"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.

Handbook of Research on Advances and Applications of Fuzzy Sets and Logic - Broumi, Said 2022-03-04
Fuzzy logic, which is based on the concept of fuzzy set, has enabled scientists to create models under conditions of imprecision, vagueness, or both at once. As a result, it has now found many important applications in almost all sectors of human activity, becoming a complementary feature and supporter of probability theory, which is suitable for modelling situations of uncertainty derived from randomness. Fuzzy mathematics has also significantly developed at the theoretical level, providing important insights into branches of traditional mathematics like algebra, analysis, geometry, topology, and more. With such widespread applications, fuzzy sets and logic are an important area of focus in mathematics. The Handbook of Research on Advances and Applications of Fuzzy Sets and Logic studies recent theoretical advances of fuzzy sets and numbers, fuzzy systems, fuzzy logic and their generalizations, extensions, and more. This

book also explores the applications of fuzzy sets and logic applied to science, technology, and everyday life to further provide research on the subject. This book is ideal for mathematicians, physicists, computer specialists, engineers, practitioners, researchers, academicians, and students who are looking to learn more about fuzzy sets, fuzzy logic, and their applications.

Fuzzy and Neutrosophic Sets in Semigroups - Young Bae Jun 2018-01-01
The topics discussed in this book are Int-soft semigroup, Int-soft left (right) ideal, Int-soft (generalized) bi-ideal, Int-soft quasi-ideal, Int-soft interior ideal, Int-soft left (right) duo semigroup, starshaped ($\in, \in \lor$ qk)-fuzzy set, quasi-starshaped ($\in, \in \lor$ qk)-fuzzy set, semidetached mapping, semidetached semigroup, ($\in, \in \lor$qk)-fuzzy subsemi-group, (qk, $\in \lor$qk)-fuzzy subsemigroup, ($\in, \in \lor$ qk)-fuzzy subsemigroup, (qk, $\in \lor$ qk)-fuzzy subsemigroup, ($\in \lor$ qk, $\in \lor$ qk)-fuzzy subsemigroup, ($\in, \in \lor$ qkδ)-fuzzy subsemigroup, $\in \lor$ qkδ -level subsemigroup/bi-ideal, ($\in, \in \lor$ qkδ)-fuzzy (generalized) bi-ideal, δ-lower (δ-upper) approximation of fuzzy set, δ-lower (δ-upper) rough fuzzy subsemigroup, δ-rough fuzzy subsemigroup, Neutrosophic N -structure, neutrosophic N -subsemigroup, ε-neutrosophic N -subsemigroup, and neutrosophic N -product.

Neutrosophic Set Approach for Characterizations of Left Almost Semigroups - Madad Khan
In this paper we have defined neutrosophic ideals, neutrosophic interior ideals, netrosophic quasi-ideals and neutrosophic bi-ideals (neutrosophic generalized bi-ideals) and proved some results related to them.

New types of Neutrosophic Set/Logic/Probability, Neutrosophic Over-/Under-/Off-Set, Neutrosophic Refined Set, and their Extension to Plithogenic Set/Logic/Probability, with Applications - Florentin Smarandache 2019-11-27
This book contains 37 papers by 73 renowned experts from 13 countries around the world, on following topics: neutrosophic set; neutrosophic rings; neutrosophic quadruple rings; idempotents; neutrosophic extended triplet group; hypergroup; semihypergroup; neutrosophic extended triplet group; neutrosophic extended triplet semihypergroup and hypergroup; neutrosophic offset; uninorm; neutrosophic offuninorm and offnorm; neutrosophic offconorm; implicator; prospector; n-person cooperative game; ordinary single-valued neutrosophic (co)topology; ordinary single-valued neutrosophic subspace; α-level; ordinary single-valued neutrosophic neighborhood system; ordinary single-valued neutrosophic base and subbase; fuzzy numbers; neutrosophic numbers; neutrosophic symmetric scenarios; performance indicators; financial assets; neutrosophic extended triplet group; neutrosophic quadruple numbers; refined neutrosophic numbers; refined neutrosophic quadruple numbers; multigranulation neutrosophic rough set; nondual; two universes; multiattribute group decision making; nonstandard analysis; extended nonstandard analysis; monad; binad; left monad closed to the right; right monad closed to the left; pierced binad; unpierced binad; nonstandard neutrosophic mobinad set; neutrosophic topology; nonstandard neutrosophic topology; visual tracking; neutrosophic weight; objectness; weighted multiple instance learning; neutrosophic triangular norms; residuated lattices; representable neutrosophic t-norms; De Morgan neutrosophic triples; neutrosophic residual implications; infinitely ∨-distributive; probabilistic neutrosophic hesitant fuzzy set; decision-making; Choquet integral; e-marketing; Internet of Things; neutrosophic set; multicriteria decision making techniques; uncertainty modeling; neutrosophic goal programming approach; shale gas water management system.

Neutrosophic Sets and Systems, Vol. 38, 2020 - Florentin Smarandache
"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.

MAGDM for agribusiness in the environment of various cubic m-polar fuzzy averaging aggregation operators - Muhammad Riaz
In multi-attribute group decision-making (MAGDM) problems, there exist some multi-polarity for the attributes and criteria. Sometimes in real life situations, we deal with the both membership and non-membership grades for the attributes in the presence of multi-polarity. For this purpose, we change verbally stated information into mathematical language with the help of uncertain linguistic variables to deal with the ambiguities and uncertainties.

New Trends in Fuzzy Set Theory and Related Items - Esteban Indurain 2018-09-04

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

Fuzzy Sets and Operations Research - Bing-Yuan Cao 2019-03-18
This book presents the latest advances in applying fuzzy sets and operations research technology and methods. It is the first fuzzy mathematics textbook for students in high school and technical secondary schools. Part of Springer's book series: Advances in Intelligent and Soft Computing, it includes the 36 best papers from the Ninth International Conference on Fuzzy Information and Engineering (ICFIE2017), organized by the Fuzzy Information and Engineering Branch of Operations Research Society of China and Operations Research Society of Guangdong Province in China. Every paper has been carefully peer-reviewed by leading experts. The areas covered include 1. Fuzzy Measure and Integral; 2. Fuzzy Topology and Algebras; 3. Classification and Recognition; 4. Control and Fuzziness; 5. Extension of Fuzzy Set and System; 6. Operations Research and Management (OR); The book is suitable for college, masters and doctoral students; educators in universities, colleges, middle and primary schools teaching mathematics, fuzzy sets and systems, operations research, information and engineering, as well as management, control. Discussing case applications, it is also a valuable reference resource for professionals interested in theoretical and practical research.

Fuzzy Semirings with Applications to Automata Theory - Javed Ahsan 2012-03-14
The purpose of this book is to present an up to date account of fuzzy ideals of a semiring. The book concentrates on theoretical aspects and consists of eleven chapters including three invited chapters. Among the invited chapters, two are devoted to applications of Semirings to automata theory, and one deals with some generalizations of Semirings. This volume may serve as a useful hand book for graduate students and researchers in the areas of Mathematics and Theoretical Computer Science.

Fuzzy Automata and Languages - John N. Mordeson 2002-03-19
The huge number and broad range of the existing and potential applications of fuzzy logic have precipitated a veritable avalanche of books published on the subject. Most, however, focus on particular areas of application. Many do no more than scratch the surface of the theory that holds the power and promise of fuzzy logic. Fuzzy Automata and Languages: Theory and Applications offers the first in-depth treatment of the theory and mathematics of fuzzy automata and fuzzy languages. After introducing background material, the authors study max-min machines and max-product machines, developing their respective algebras and exploring properties such as equivalences, homomorphisms, irreducibility, and minimality. The focus then turns to fuzzy context-free grammars and languages, with special attention to trees, fuzzy dendrolanguage generating systems, and normal forms. A treatment of algebraic fuzzy automata theory follows, along with additional results on fuzzy languages, minimization of fuzzy automata, and recognition of fuzzy languages. Although the book is theoretical in nature, the authors also discuss applications in a variety of fields, including databases, medicine, learning systems, and pattern recognition. Much of the information on fuzzy languages is new and never before presented in book form. Fuzzy Automata and Languages incorporates virtually all of the important material published thus far. It stands alone as a complete reference on the subject and belongs on the shelves of anyone interested in fuzzy mathematics or its applications.

Theory of Abel Grassmann's Groupoids - Madad Khan, Florentin Smarandache, Saima Anis 2015-04-01
We extend now for the first time the AG-groupoid to the Neutrosophic AG-groupoid. A neutrosophic AG-groupoid is a neutrosophic algebraic structure that lies between a neutrosophic groupoid and a neutrosophic commutative semigroup.

Decomposition of Single-Valued Neutrosophic Ideal Continuity via Fuzzy Idealization - Fahad Alsharari 2020-12-01
The aim of this paper is to introduce various types of r-single-valued neutrosophic open sets based on the single-valued neutrosophic ideals in Sostak Sense. Different mappings of single-valued continuity and ideal continuity based on the r-single-valued neutrosophic ideal openness are defined and many implications between them are investigated with counterexamples illustrated.

Fuzzy Information & Engineering and Operations Research & Management - Bing-Yuan Cao 2013-11-26
Fuzzy Information & Engineering and Operations Research & Management is the monograph from submissions by the 6th International Conference on Fuzzy Information and Engineering (ICFIE2012, Iran)

and by the 6th academic conference from Fuzzy Information Engineering Branch of Operation Research Society of China (FIEBORSC2012, Shenzhen,China). It is published by Advances in Intelligent and Soft Computing (AISC). We have received more than 300 submissions. Each paper of it has undergone a rigorous review process. Only high-quality papers are included in it containing papers as follows: I Programming and Optimization. II Lattice and Measures. III Algebras and Equation. IV Forecasting, Clustering and Recognition. V Systems and Algorithm. VI Graph and Network. VII Others.

Neutrosophic Sets and Systems, vol. 11/2016 - N. Radwan
"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.

BCK-algebras - Jie Meng 1994-06-01

Algebra and its Applications - Syed Tariq Rizvi 2016-11-18
This book discusses recent developments and the latest research in algebra and related topics. The book allows aspiring researchers to update their understanding of prime rings, generalized derivations, generalized semiderivations, regular semigroups, completely simple semigroups, module hulls, injective hulls, Baer modules, extending modules, local cohomology modules, orthogonal lattices, Banach algebras, multilinear polynomials, fuzzy ideals, Laurent power series, and Hilbert functions. All the contributing authors are leading international academicians and researchers in their respective fields. Most of the papers were presented at the international conference on Algebra and its Applications (ICAA-2014), held at Aligarh Muslim University, India, from December 15–17, 2014. The book also includes papers from mathematicians who couldn't attend the conference. The conference has emerged as a powerful forum offering researchers a venue to meet and discuss advances in algebra and its applications, inspiring further research directions.

Handbook of Research on Emerging Applications of Fuzzy Algebraic Structures - Jana, Chiranjibe 2019-10-25
In the world of mathematics, the study of fuzzy relations and its theories are well-documented and a staple in the area of calculative methods. What many researchers and scientists overlook is how fuzzy theory can be applied to industries outside of arithmetic. The framework of fuzzy logic is much broader than professionals realize. There is a lack of research on the full potential this theoretical model can reach. The Handbook of Research on Emerging Applications of Fuzzy Algebraic Structures provides emerging research exploring the theoretical and practical aspects of fuzzy set theory and its real-life applications within the fields of engineering and science. Featuring coverage on a broad range of topics such as complex systems, topological spaces, and linear transformations, this book is ideally designed for academicians, professionals, and students seeking current research on innovations in fuzzy logic in algebra and other matrices.

Fuzzy Matrix - A. R. Meenakshi 2019-06-11
This book aims to introduce fuzzy matrix theory as a basic framework for characterizing the full scope of the fuzzy sets concept and its relationship with the increasingly important concept of information and complexity in various sciences and professions. The book provides a wide coverage on the theoretical developments of fuzzy matrices and fuzzy vector spaces, on the theory of generalized inverses for fuzzy matrices, on fuzzy relations and on partial orderings on fuzzy matrices. The book also discusses the role of fuzzy matrices in the spectral theory of linear transformations on finite dimensional vector spaces. The concept of fuzzy matrix and its applications in document retrieval system, medical diagnosis, database management system, decision making theory and dynamical systems are developediteratively and illustrated with suitable examples wherever necessary. Each chapter has brief notes and exercises for the benefit of students.

The Journal of Fuzzy Mathematics - 2007

Proceedings of the 2012 International Conference on Cybernetics and Informatics - Shaobo Zhong

2013-08-23
Proceedings of the International Conference on Cybernetics and Informatics (ICCI 2012) covers the hybridization in control, computer, information, communications and applications. ICCI 2012 held on September 21-23, 2012, in Chongqing, China, is organized by Chongqing Normal University, Chongqing University, Nanyang Technological University, Shanghai Jiao Tong University, Hunan Institute of Engineering, Beijing University, and sponsored by National Natural Science Foundation of China (NSFC). This two volume publication includes selected papers from the ICCI 2012. Covering the latest research advances in the area of computer, informatics, cybernetics and applications, which mainly includes the computer, information, control, communications technologies and applications.

Neutrosophic Sets and Systems, Vol. 32, 2020 - Florentin Smarandache
"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: Parameter Reduction of Neutrosophic Soft Sets and Their Applications, Geometric Programming (NGP) Problems Subject to (∧,.) Operator; the Minimum Solution, Ngpr Homeomorphism in Neutrosophic Topological Spaces, Generalized Neutrosophic Separation Axioms in Neutrosophic Soft Topological Spaces.

Neutrosophic Sets and Systems, Book Series, Vol. 32, 2020. An International Book Series in Information Science and Engineering - Florentin Smarandache
"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.

Fuzzy Mathematics - Etienne E. Kerre 2018-11-28
This book is a printed edition of the Special Issue "Fuzzy Mathematics" that was published in Mathematics

Pythagorean Fuzzy Sets - Harish Garg 2021-07-22
This book presents a collection of recent research on topics related to Pythagorean fuzzy set, dealing with dynamic and complex decision-making problems. It discusses a wide range of theoretical and practical information to the latest research on Pythagorean fuzzy sets, allowing readers to gain an extensive understanding of both fundamentals and applications. It aims at solving various decision-making problems such as medical diagnosis, pattern recognition, construction problems, technology selection, and more, under the Pythagorean fuzzy environment, making it of much value to students, researchers, and professionals associated with the field.

Issues in Artificial Intelligence, Robotics and Machine Learning: 2013 Edition - 2013-05-01
Issues in Artificial Intelligence, Robotics and Machine Learning: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Expert Systems. The editors have built Issues in Artificial Intelligence, Robotics and Machine Learning: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Expert Systems in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Artificial Intelligence, Robotics and Machine Learning: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Semihypergroup Theory - Bijan Davvaz 2016-06-24
Semihypergroup Theory is the first book devoted to the semihypergroup theory and it includes basic results concerning semigroup theory and algebraic hyperstructures, which represent the most general algebraic context in which reality can be modelled. Hyperstructures represent a natural extension of classical algebraic structures and they were introduced in 1934 by the French mathematician Marty. Since then, hundreds of papers have been published on this subject. Offers the first book devoted to the

semihypergroup theory Presents an introduction to recent progress in the theory of semihypergroups Covers most of the mathematical ideas and techniques required in the study of semihypergroups Employs the notion of fundamental relations to connect semihypergroups to semigroups

BCI-Algebra - Yisheng Huang 2006

Distributed by Elsevier Science on behalf of Science Press. This book is mainly designed for graduate students who are interested in the theory of BCK and BCI-algebras. It introduces the general theoretical basis of BCI-algebras, omitting difficult proofs and abstract topics which are less necessary for beginners to learn. With abundant examples and exercises arranged after each section, it provides readers with easy-to-follow steps into this field. Specially designed for graduate students with emphasis on elementary knowledge in this field Organizes knowledge points systematically and highlights various arguments on vital topics to make them easy to be understand Gives many examples to clarify important notations and terminologies and abundant of classified exercises after each chapter for revision purposes

Smarandache Fuzzy Algebra - W. B. Vasantha Kandasamy 2003

The author studies the Smarandache Fuzzy Algebra, which, like its predecessor Fuzzy Algebra, arose from the need to define structures that were more compatible with the real world where the grey areas mattered, not only black or white.In any human field, a Smarandache n-structure on a set S means a weak structure {w(0)} on S such that there exists a chain of proper subsets P(n-1) in P(n-2) in?in P(2) in P(1) in S whose corresponding structures verify the chain {w(n-1)} includes {w(n-2)} includes? includes {w(2)} includes {w(1)} includes {w(0)}, where 'includes' signifies 'strictly stronger' (i.e., structure satisfying more axioms).This book is referring to a Smarandache 2-algebraic structure (two levels only of structures in algebra) on a set S, i.e. a weak structure {w(0)} on S such that there exists a proper subset P of S, which is embedded with a stronger structure {w(1)}. Properties of Smarandache fuzzy semigroups, groupoids, loops, bigroupoids, biloops, non-associative rings, birings, vector spaces, semirings, semivector spaces, non-associative semirings, bisemirings, near-rings, non-associative near-ring, and binear-rings are presented in the second part of this book together with examples, solved and unsolved problems, and theorems. Also, applications of Smarandache groupoids, near-rings, and semirings in automaton theory, in error correcting codes, and in the construction of S-sub-biautomaton can be found in the last chapter.

Fuzzy Graph Theory - Sunil Mathew 2017-12-30

This book provides a timely overview of fuzzy graph theory, laying the foundation for future applications in a broad range of areas. It introduces readers to fundamental theories, such as Craine's work on fuzzy interval graphs, fuzzy analogs of Marczewski's theorem, and the Gilmore and Hoffman characterization. It also introduces them to the Fulkerson and Gross characterization and Menger's theorem, the applications of which will be discussed in a forthcoming book by the same authors. This book also discusses in detail important concepts such as connectivity, distance and saturation in fuzzy graphs. Thanks to the good balance between the basics of fuzzy graph theory and new findings obtained by the authors, the book offers an excellent reference guide for advanced undergraduate and graduate students in mathematics, engineering and computer science, and an inspiring read for all researchers interested in new developments in fuzzy logic and applied mathematics.

Polarity of generalized neutrosophic subalgebras in BCK/BCI-algebras - Rajab Ali Borzooei

In the fuzzy set which is introduced by Zadeh, the membership degree is expressed by only one function so called the truth function. As a generalization of fuzzy set, intuitionistic fuzzy set is introduced by Atanassove by using membership function and nonmembership function.