The Encyclopedia of Neutrosophic Researchers

Florentin Smarandache
(founder and editor)

3rd Volume
2019

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Contents

Foreword

This is the third volume of the *Encyclopedia of Neutrosophic Researchers*, edited from materials offered by the authors who responded to the editor's invitation.

The authors are listed alphabetically.

The introduction contains a *short history of neutrosophics*, together with links to the main papers and books.

Neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics, neutrosophic measure, neutrosophic precalculus, neutrosophic calculus and so on are gaining significant attention in solving many real life problems that involve uncertainty, impreciseness, vagueness, incompleteness, inconsistent, and indeterminacy.

In the past years the fields of neutrosophics have been extended and applied in various fields, such as: artificial intelligence, data mining, soft computing, decision making in incomplete / indeterminate / inconsistent information systems, image processing, computational modelling, robotics, medical diagnosis, biomedical engineering, investment problems, economic forecasting, social science, humanistic and practical achievements.

The authors, who have published neutrosophic papers, books, or defended neutrosophic master theses or PhD dissertations and are not included in the three volumes of the *Encyclopedia of Neutrosophic Researchers*, are kindly invited to send their CV, a photo, and a list of neutrosophic publications to fsmarandache@gmail.com and neutrosophy@laposte.net to be part of the fourth volume.

Prof. Florentin Smarandache, Ph D
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History of Neutrosophic Theory and its Applications (updated)

Zadeh introduced the *degree of membership/truth* (T) in 1965 and defined the fuzzy set.

Atanassov introduced the *degree of nonmembership/falsehood* (F) in 1986 and defined the intuitionistic fuzzy set.

Smarandache introduced the ***degree of indeterminacy/neutrality*** (I) as independent component in 1995 (published in 1998) and he defined the neutrosophic set on three components:

(T, I, F) = (Truth, Indeterminacy, Falsehood), where in general T, I, F are subsets of the interval [0, 1]; in particular T, I, F may be intervals, hesitant sets, or single-values; see

F. Smarandache, *Neutrosophy / Neutrosophic probability, set, and logic"*, *Proquest, Michigan, USA*, 1998,

https://arxiv.org/ftp/math/papers/0101/0101228.pdf
http://fs.unm.edu/eBook-Neutrosophics6.pdf;

reviewed in Zentralblatt fuer Mathematik (Berlin, Germany): https://zbmath.org/?q=an:01273000

and cited by Denis Howe in *The Free Online Dictionary of Computing*, England, 1999.

Neutrosophic Set and Logic are generalizations of classical, fuzzy, and intuitionistic fuzzy set and logic:

https://arxiv.org/ftp/math/papers/0404/0404520.pdf
https://arxiv.org/ftp/math/papers/0303/0303009.pdf

Nonstandard Neutrosophic Logic, Set, Probability (1998, 2019)

https://arxiv.org/ftp/arxiv/papers/1903/1903.04558.pdf

While Neutrosophic Probability and Statistics are generalizations of classical and imprecise probability and statistics.

Etymology.

The words "neutrosophy" and "neutrosophic" were coined/invented by F. Smarandache in his 1998 book.

Neutrosophy.

A branch of philosophy, introduced by F. Smarandache in 1980, which studies the origin, nature, and scope of neutralities, as well as their interactions with different ideational spectra. Neutrosophy considers a proposition, theory, event, concept, or entity <A> in relation to its opposite <antiA>, and with their neutral <neutA>.

Neutrosophy (as dynamic of opposites and their neutrals) is an extension of the Dialectics (which is the dynamic of opposites only).

Neutrosophy is the basis of neutrosophic logic, neutrosophic probability, neutrosophic set, and neutrosophic statistics.

https://arxiv.org/ftp/math/papers/0010/0010099.pdf

Neutrosophic Logic is a general framework for unification of many existing logics, such as fuzzy logic (especially intuitionistic fuzzy logic), paraconsistent logic, intuitionistic logic, etc. The main idea of NL is to characterize each logical statement in a 3D-Neutrosophic Space, where each dimension of the space represents respectively the truth (T), the falsehood (F), and the indeterminacy (I) of the statement under consideration, where T, I, F are standard or non-standard real subsets of $]^-0, 1^+[$ with not necessarily any connection between them.

For software engineering proposals the classical unit interval [0, 1] may be used.

Degrees of Dependence and Independence between Neutrosophic Components

T, I, F are *independent components*, leaving room for incomplete information (when their superior sum < 1), paraconsistent and contradictory information (when the superior sum > 1), or complete information (sum of components = 1).

For software engineering proposals the classical unit interval [0, 1] is used.

For single valued neutrosophic logic, the sum of the components is:

$0 \leq t+i+f \leq 3$ when all three components are independent;

$0 \leq t+i+f \leq 2$ when two components are dependent, while the third one is independent from them;

$0 \leq t+i+f \leq 1$ when all three components are dependent.

When three or two of the components T, I, F are independent, one leaves room for incomplete information (sum < 1), paraconsistent and contradictory information (sum > 1), or complete information (sum = 1).

If all three components T, I, F are dependent, then similarly one leaves room for incomplete information (sum < 1), or complete information (sum = 1).

In general, the sum of two components x and y that vary in the unitary interval [0, 1] is:

$0 \leq x + y \leq 2 - d°(x, y)$, where $d°(x, y)$ is the degree of dependence between x and y, while

$d°(x, y)$ is the degree of independence between x and y.

https://doi.org/10.5281/zenodo.571359

http://fs.unm.edu/NSS/DegreeOfDependenceAndIndependence.pdf

In 2013 Smarandache *refined the neutrosophic set to n components*: $(T_1, T_2, ...; I_1, I_2, ...; F_1, F_2, ...)$;

https://arxiv.org/ftp/arxiv/papers/1407/1407.1041.pdf

http://fs.unm.edu/n-ValuedNeutrosophicLogic-PiP.pdf .

The Most Important Books and Papers in the Advancement of Neutrosophics

1995-1998 – *Smarandache generalized the dialectics to neutrosophy;*

introduced the neutrosophic set/logic/probability/statistics;

introduces the single-valued neutrosophic set (pp. 7-8);

https://arxiv.org/ftp/math/papers/0101/0101228.pdf (fourth edition)
http://fs.unm.edu/eBook-Neutrosophics6.pdf (online edition)

2002 – Introduction of corner cases of sets / probabilities / statistics / logics, such as:

- Neutrosophic intuitionistic set (different from intuitionistic fuzzy set), neutrosophic paraconsistent set, neutrosophic faillibilist set, neutrosophic paradoxist set, neutrosophic pseudo-paradoxist set, neutrosophic tautological set, neutrosophic nihilist set, neutrosophic dialetheist set, neutrosophic trivialist set;

- Neutrosophic intuitionistic probability and statistics, neutrosophic paraconsistent probability and statistics, neutrosophic faillibilist probability and statistics, neutrosophic paradoxist probability and statistics, neutrosophic pseudo-paradoxist probability and statistics, neutrosophic tautological probability and statistics, neutrosophic nihilist probability and statistics, neutrosophic dialetheist probability and statistics,neutrosophic trivialist probability and statistics;

- Neutrosophic paradoxist logic (or paradoxism), neutrosophic pseudo-paradoxist logic (or neutrosophic pseudo-paradoxism), neutrosophic tautological logic (or neutrosophic tautologism):

https://arxiv.org/ftp/math/papers/0301/0301340.pdf
http://fs.unm.edu/DefinitionsDerivedFromNeutrosophics.pdf

2003 – *Introduction by Kandasamy and Smarandache of* **Neutrosophic Numbers** *(a+bI, where I = indeterminacy, I^2 = I),* **I-Neutrosophic Algebraic Structures** and **Neutrosophic Cognitive Maps**
https://arxiv.org/ftp/math/papers/0311/0311063.pdf
http://fs.unm.edu/NCMs.pdf

2005 - *Introduction of* **Interval Neutrosophic Set/Logic**
https://arxiv.org/pdf/cs/0505014.pdf
http://fs.unm.edu/INSL.pdf

2006 – Introduction of **Degree of Dependence and Degree of Independence between the Neutrosophic Components** *T, I, F*
http://fs.unm.edu/eBook-Neutrosophics6.pdf (p. 92)
http://fs.unm.edu/NSS/DegreeOfDependenceAndIndependence.pdf

2007 – The Neutrosophic Set was extended [Smarandache, 2007] to **Neutrosophic Overset** (when some neutrosophic component is > 1), since he observed that, for example, an employee working overtime deserves a degree of membership > 1, with respect to an employee that only works regular full-time and whose degree of membership = 1;

and to **Neutrosophic Underset** (when some neutrosophic component is < 0), since, for example, an employee making more damage than benefit to his company deserves a degree of membership < 0, with respect to an employee that produces benefit to the company and has the degree of membership > 0;

and to and to **Neutrosophic Offset** (when some neutrosophic components are off the interval [0, 1], i.e. some neutrosophic component > 1 and some neutrosophic component < 0).

Then, similarly, the Neutrosophic Logic/Measure/Probability/Statistics etc. were extended to respectively *Neutrosophic Over-/Under-/Off- Logic, Measure, Probability, Statistics* etc.

https://arxiv.org/ftp/arxiv/papers/1607/1607.00234.pdf
http://fs.unm.edu/NeutrosophicOversetUndersetOffset.pdf
http://fs.unm.edu/SVNeutrosophicOverset-JMI.pdf
http://fs.unm.edu/IV-Neutrosophic-Overset-Underset-Offset.pdf

2007 – Smarandache *introduced the*
Neutrosophic Tripolar Set and *Neutrosophic Multipolar Set*
and consequently
the Neutrosophic Tripolar Graph and *Neutrosophic Multipolar Graph*

http://fs.unm.edu/eBook-Neutrosophics6.pdf *(p. 93)*
http://fs.unm.edu/IFS-generalized.pdf

2009 – *Introduction of N-norm and N-conorm*
https://arxiv.org/ftp/arxiv/papers/0901/0901.1289.pdf
http://fs.unm.edu/N-normN-conorm.pdf

2013 - *Development of Neutrosophic*
Measure and *Neutrosophic Probability*
(*chance that an event occurs, indeterminate chance of occurrence,*
chance that the event does not occur)
https://arxiv.org/ftp/arxiv/papers/1311/1311.7139.pdf
http://fs.unm.edu/NeutrosophicMeasureIntegralProbability.pdf

2013 – Smarandache *Refined the Neutrosophic*
Components (T, I, F) as (T$_1$, T$_2$, ...; I$_1$, I$_2$, ...; F$_1$, F$_2$, ...)
http://fs.unm.edu/n-ValuedNeutrosophicLogic-PiP.pdf

2014 – *Introduction of the Law of Included Multiple Middle*
(*<A>; <neut1A>, <neut2A>, …; <antiA>*)
http://fs.unm.edu/LawIncludedMultiple-Middle.pdf

2014 - *Development of Neutrosophic Statistics (indeterminacy*
is introduced into classical statistics with respect to the
sample/population, or with respect to the individuals that only
partially belong to a sample/population)
https://arxiv.org/ftp/arxiv/papers/1406/1406.2000.pdf
http://fs.unm.edu/NeutrosophicStatistics.pdf

2015 - *Introduction of* ***Neutrosophic Precalculus and Neutrosophic Calculus***

https://arxiv.org/ftp/arxiv/papers/1509/1509.07723.pdf
http://fs.unm.edu/NeutrosophicPrecalculusCalculus.pdf

2015 – ***Refined Neutrosophic Numbers*** *(a+ b_1I_1 + b_2I_2 + … + b_nI_n), where I_1, I_2, …, I_n are subindeterminacies of indeterminacy I;*
2015 – *(t,i,f)-neutrosophic graphs;*
2015 - *Thesis-Antithesis-Neutrothesis, and Neutrosynthesis, Neutrosophic Axiomatic System, neutrosophic dynamic systems, symbolic neutrosophic logic, (t, i, f)-Neutrosophic Structures, I-Neutrosophic Structures, Refined Literal Indeterminacy, Quadruple Neutrosophic Algebraic Structures, Multiplication Law of Subindeterminacies*:

https://arxiv.org/ftp/arxiv/papers/1512/1512.00047.pdf
http://fs.unm.edu/SymbolicNeutrosophicTheory.pdf

2015 – Introduction of the **Subindeterminacies** of the form $(I_0)^n$ = k/0, for k ∈ {0, 1, 2, …, n-1}, into the ring of modulo integers Z_n - called natural neutrosophic indeterminacies (Vasantha-Smarandache)

http://fs.unm.edu/MODNeutrosophicNumbers.pdf

2015 – Introduction of **Neutrosophic Crisp Set and Topology** (Salama & Smarandache)

http://fs.unm.edu/NeutrosophicCrispSetTheory.pdf

2016 – Introduction of **Neutrosophic Multisets** (as generalization of classical multisets)

http://fs.unm.edu/NeutrosophicMultisets.htm

2016 – Introduction of **Neutrosophic Triplet Structures** and m-valued refined neutrosophic triplet structures [Smarandache - Ali]

http://fs.unm.edu/NeutrosophicTriplets.htm

2016 – Introduction of **Neutrosophic Duplet Structures**
http://fs.unm.edu/NeutrosophicDuplets.htm

2017 - In biology Smarandache introduced the **Theory of Neutrosophic Evolution: Degrees of Evolution, Indeterminacy or Neutrality**, and Involution

http://fs.unm.edu/neutrosophic-evolution-PP-49-13.pdf

2017 - Introduction by F. Smarandache of **Plithogeny** (as generalization of Dialectics and Neutrosophy), and **Plithogenic Set/Logic/Probability/Statistics** (as generalization of fuzzy, intuitionistic fuzzy, neutrosophic set/logic/probability/statistics)

https://arxiv.org/ftp/arxiv/papers/1808/1808.03948.pdf
http://fs.unm.edu/Plithogeny.pdf

2018 – Introduction to **Neutrosophic Psychology** (Neutropsyche, Refined Neutrosophic Memory: conscious, aconscious, unconscious, Neutropsychic Personality, Eros / Aoristos / Thanatos, Neutropsychic Crisp Personality)

http://fs.unm.edu/NeutropsychicPersonality-ed3.pdf

2019 - Introduction to **Neutrosophic Sociology** (Neutrosociology) [neutrosophic concept, or *(T, I, F)-concept*, is a concept that is $T\%$ true, $I\%$ indeterminate, and $F\%$ false]

http://fs.unm.edu/Neutrosociology.pdf

Applications in:

Artificial Intelligence, Information Systems, Computer Science, Cybernetics, Theory Methods, Mathematical Algebraic Structures, Applied Mathematics, Automation, Control Systems, Big Data, Engineering, Electrical, Electronic, Philosophy, Social Science, Psychology, Biology, Biomedical, Engineering, Medical Informatics, Operational Research, Management Science, Imaging Science, Photographic Technology, Instruments, Instrumentation, Physics, Optics, Economics, Mechanics, Neurosciences, Radiology Nuclear, Medicine, Medical Imaging, Interdisciplinary Applications, Multidisciplinary Sciences etc.

[Xindong Peng and Jingguo Dai, *A bibliometric analysis of neutrosophic set: two decades review from 1998 to 2017*, Artificial Intelligence Review, Springer, 18 August 2018;

http://fs.unm.edu/BibliometricNeutrosophy.pdf]

Neutrosophic Sets and Systems (NSS) international journal started in 2013 and it is indexed by Scopus, Web of Science (ESCI), DOAJ, Index Copernicus, Redalyc - Universidad Autonoma del Estado de Mexico (IberoAmerica), Publons, CNKI, Google Scholar, Chinese Baidu Scholar etc. (http://fs.unm.edu/NSS/).

Submit papers on neutrosophic set/logic/probability/statistics and their applications to the editor-in-chief: smarand@unm.edu .

Encyclopedia of Neutrosophic Researchers

The authors who have published or presented papers on neutrosophics and are not included in the *Encyclopedia of Neutrosophic Researchers* (ENR), vols. 1, 2 and 3,
http://fs.unm.edu/EncyclopediaNeutrosophicResearchers.pdf
http://fs.unm.edu/EncyclopediaNeutrosophicResearchers2.pdf
http://fs.unm.edu/EncyclopediaNeutrosophicResearchers3.pdf

are pleased to send their CV, photo, and List of Neutrosophic Publications to smarand@unm.edu in order to be included into the fourth volume of ENR.

MSc, MPhil (PhD)

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Profile

Received B.Sc. (Mathematics) degree in 2012 from Government Arts College, Salem, Tamilnadu, India under Periyar University. Received both M.Sc. (Mathematics) and M.Phil. (Mathematics) from the same institution in 2014 and 2015. Also he successfully cleared TNSET(Tamilnadu State Eligibility Test) in 2017 which is essential for teaching profession in Tamilnadu. He worked as an Assistant Professor in AVS College of Technology, Salem from 2015-16. Currently, he works as an Assistant Professor in Bannari Amman Institute of Technology, Erode. Currently, he is pursuing his PhD in Digital Topology from Bharathiar University, Coimbatore, Tamilnadu. He has published two papers in *Neutrosophic sets and systems* (SCOPUS indexed). He has presented three papers in International and National level conferences. His areas of interest includes Neutrosophy, Digital image processing, Advanced engineering mathematics.

Research Interests

Image analysis through neutrosophic sets. Currently, developing the representation of image in bipolar neutrosophic domain.

List of Publications in Neutrosophics

P. Arulpandy, M. Trinita Pricilla (2019). Some similarity and entropy measurements of bipolar neutrosophic soft sets, *Neutrosophic sets and systems*, 25, 174-194.

PhD

Amira S. Ashour

Assistant Prof. and Head of EEC Dept.

Affiliation
Department of Electronics and Electrical Communications Engineering
Faculty of Engineering, Tanta University / EGYPT

Profile

Currently an Assistant Professor and Head of Electronics and Electrical Communications Engineering, Faculty of Engineering, Tanta University, Egypt. She was the Vice-chair of Computer Engineering Department, Computers and Information Technology (CIT) College, Taif University, KSA for one year from 2015. She was the Vice-chair of Computer Science Department, CIT College, Taif University, KSA for 5 years. She has authored/edited more than 20 books with Elsevier, and Springer, and published more than 150 papers in repute journals.

Ashour is a Series Co-Editor of Advances in Ubiquitous Sensing Applications for Healthcare, Elsevier. She is an Editor-in-Chief for the International Journal of Synthetic Emotions (IJSE), IGI Global, US. She is an Associate Editor of the IJRSDA, IGI Global, US as well as the IJACI, IGI Global, US. She is an Editorial Board Member of the International Journal of Image Mining (IJIM), Inderscience and reviewer of several repute journals.

Research Interests

Biomedical Engineering, Computer- aided diagnosis systems, Image processing, Medical imaging, Machine learning, Optimization, Neutrosophic theory, Smart antenna, Direction of arrival estimation, and Targets tracking.

List of Publications in Neutrosophics

Edited Books

Yanhui Guo, Amira S. Ashour: *Neutrosophic Set in Medical Image Analysis*. 09/2019; Elsevier. Paperback ISBN: 9780128181485 [https://www.elsevier.com/books/neutrosophic-set-in-medical-image-analysis/guo/978-0-12-818148-5]

Journal Publications

Amira S. Ashour, Ahmed Refaat Hawas, Yanhui Guo, Maram A. Wahba: A novel optimized neutrosophic k-means using genetic algorithm for skin lesion detection in dermoscopy images. *Signal Image and Video Processing* 05/2018;, DOI:10.1007/s11760-018-1284-y

Yanhui Guo, Amira S. Ashour, Florentin Smarandache: A Novel Skin Lesion Detection Approach Using Neutrosophic Clustering and Adaptive Region Growing in Dermoscopy Images. *Symmetry* 10/2018; 10(4):19

Amira S. Ashour, Yanhui Guo, Enver Kucukkulahli, Pakize Erdogmus, Kemal Polat: A Hybrid Dermoscopy Images Segmentation Approach Based on Neutrosophic Clustering and Histogram Estimation. *Applied Soft Computing* 05/2018; 69., DOI:10.1016/j.asoc.2018.05.003

Book Chapters

Amira S. Ashour, Yanhui Guo, Advanced Optimization based Neutrosophic Set for Medical Image Denoising. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Amira S. Ashour, Yanhui Guo, Ahmed Refaat Hawas, Neutrosophic Hough Transform for Blood Cells Nuclei Detection. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Ahmed Refaat Hawas, Amira S. Ashour, Yanhui Guo, Neutrosophic Set in Medical Image Clustering Images. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Ahmed Esmail Shahin, Yanhui Guo, Amira S. Ashour, Advanced Neutrosophic Set in Microscopic Image Analysis. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Yanhui Guo, Amira S. Ashour, Neutrosophic Set in Dermoscopic Medical Image Segmentation. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Yanhui Guo, Amira S. Ashour, Neutrosophic Multiple Deep Convolutional Neural Network for Skin Dermoscopic Image Classification. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

Ahmed Esmail Shahin, Yanhui Guo, Amira S. Ashour, Neutrosophic Set based Denoising of Optical Coherence Tomography Images. In *Neutrosophic Set in Medical Image Analysis*, Elsevier [In press]

PhD

Muhammad Aslam

Professor of Statistics

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Department of Statistics, Faculty of Science
King Abdul Aziz Universit
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Profile

Received his M.Sc in Statistics (2004) from GC University Lahore with Chief Minister of the Punjab merit scholarship, M. Phil in Statistics (2006) from GC University Lahore with the Governor of the Punjab merit scholarship, and Ph.D. in Statistics (2010) from National College of Business Administration & Economics Lahore under the kind supervision of Prof. Dr. Munir Ahmad. He worked as a lecturer of Statistics in Edge College System International from 2003-2006. He also worked as Research Assistant in the Department of Statistics, GC University Lahore from 2006 to 2008. Then he joined the Forman Christian College University as a lecturer in August 2009. He worked as Assistant Professor in the same University from June 2010 to April 2012. He worked in the same department as Associate Professor from June 2012 to October 2014. He worked as Associate Professor of Statistics in the Department of Statistics, Faculty of Science, King Abdulaziz University, Jeddah, Saudi Arabia from October 2014 to March 2017. He taught summer course as Visiting Faculty of Statistics at Beijing Jiaotong University, China in 2016. Currently, he is working as a Full Professor of Statistics in department of Statistics, King Abdul-Aziz University Jeddah, Saudi Arabia. He has published more than 325 research papers in national and international well reputed journals including for example, IEEE Access, Journal of Applied Statistics, European Journal of Operation Research, Information Sciences, Journal of Process Control, Journal of the Operational Research Society, Applied

Mathematical Modeling, International Journal of Fuzzy Systems, Symmetry, International Journal of Advanced Manufacturer Technology, Communications in Statistics, Journal of Testing and Evaluation and Pakistan Journal of Statistics etc. His papers have been cited more than 2800 times with h-index 30 and i-10 index 84 (Google Scholar). His papers have been cited more than 1300 times with h-index 21 (Web of Science Citations). He is the author of one book published in Germany. He is also HEC approved PhD supervisor since 2011. He supervised 5 PhD theses, more than 25 M.Phil theses and 3 M.Sc theses. Dr. Muhammad Aslam is currently supervising 1 PhD thesis and more than 5 M.Phil theses in Statistics. He is reviewer of more than 50 well reputed international journals. He has reviewed more than 140 research papers for various well reputed international journals. He received meritorious services award in research from National College of Business Administration & Economics Lahore in 2011. He received Research Productivity Award for the year 2012 by Pakistan Council for Science and Technology. His name Listed at 2nd Position among Statistician in the Directory of Productivity Scientists of Pakistan 2013. His name Listed at 1st Position among Statistician in the Directory of Productivity Scientists of Pakistan 2014. He got 371 positions in the list of top 2210 profiles of Scientist of Saudi Institutions 2016. He is selected for "Innovative Academic Research & Dedicated Faculty Award 2017" by SPE, Malaysia. He Received King Abdulaziz University Excellence Awards in Scientific Research for the paper entitled "Aslam, M., Azam, M., Khan, N. and Jun, C.-H. (2015). A New Mixed Control Chart to Monitor the Process, International Journal of Production Research, 53 (15), 4684–4693. He Received King Abdulaziz University citation award for the paper entitled "Azam, M., Aslam, M. and Jun, C.-H. (2015). Designing of a hybrid exponentially weighted moving average control chart using repetitive sampling, International Journal of Advanced Manufacturing Technology, 77:1927–1933 in 2018. He is the member of editorial board of Electronic Journal of Applied Statistical Analysis, Asian Journal of Applied Science and Technology and Pakistan Journal of Commence and Social sciences. He is also member of Islamic Countries Society of

Statistical Sciences. He is appointed as an external examiner for 2016/2017-2018/2019 triennium at The University of Dodoma, Tanzania. His areas of interest include reliability, decision trees, Industrial Statistics, acceptance sampling, rank set sampling, neutrosophic statistics and applied Statistics.

Research Interests

Introduced the area of Neutrosophic Statistical Quality Control (NSQC) the first time. His is the founder of neutrosophic inferential statistics (NIS) and NSQC. His contribution is the development of neutrosophic statistics theory for the inspection and process control. He originally developed theory in these areas under the Neutrosophic Statistics. He extended the Classical Statistics theory to Neutrosophic Statistics originally in 2018.

List of Publications in Neutrosophics

Aslam, M. (2018). A New Sampling Plan Using Neutrosophic Process Loss Consideration, *Symmetry*, 10 (5), 132, 1-5.

Aslam, M. and Arif, O. A. (2018). Testing of Grouped Product for the Weibull Distribution Using Neutrosophic Statistics, *Symmetry*, 10 (9):403.

Aslam, M., Khan, N. and Khan, M.A. (2018). Monitoring the Variability in the Process Using the Neutrosophic Statistical Interval Method, *Symmetry*, 10 (11), 562.

Aslam, M. (2018). Design of Sampling Plan for Exponential Distribution under Neutrosophic Interval Statistical Method, *IEEE Access*, 6 (1), 64153-64158.

Aslam, M. (2019). Product Acceptance Determination with Measurement Error Using the Neutrosophic Statistics, *Advances in Fuzzy Systems*, Article ID 8953051, 8 pages

Aslam, M., Khan, N. and AL-Marshadi, A. H. (2019). Design of Variable Sampling Plan for Pareto Distribution Using Neutrosophic Statistical Interval Method, *Symmetry*, 11 (1), 80.

Aslam, M. (2019). A Variable Acceptance Sampling Plan under Neutrosophic Statistical Interval Method, *Symmetry*, 11 (1), 114.

Aslam, M. and Aldosari, M.S. (2019). Inspection Strategy under Indeterminacy based on Neutrosophic Coefficient of Variation, *Symmetry*, 11 (2), 193.

Aslam, M. (2019). Attribute Control Chart Using the Repetitive Sampling under Neutrosophic System, *IEEE Access*, 7 (1), 15367-15374.

Aslam, M. and Albassamm, M. (2019). Application of Neutrosophic Logic to Evaluate Correlation between Prostate Cancer Mortality and Dietary Fat Assumption, *Symmetry*, 11 (3), 330.

Aslam, M. Control Chart for Variance using Repetitive Sampling under Neutrosophic Statistical Interval System, *IEEE Access*, 7 (1), 25253-25262.

Aslam, M., Bantan, R. A.R. and Khan, N. (2019). Design of a New Attribute Control Chart under Neutrosophic Statistics, *International Journal of Fuzzy System*, 21 (2), 433-440.

Aslam, M., Azam, M. and Albassam, M. (2019). Sampling Plan using Process Loss Index using Multiple Dependent State Sampling under Neutrosophic Statistics, *IEEE Access*, 7 (1), 38568-38576.

Aslam, M. and Khan, N. (2019). A New Variable Control Chart Using Neutrosophic Interval Method-An Application to Automobile Industry, *Journal of Intelligent & Fuzzy Systems*, 36 (3), 2615-2623.

Aslam, M., Bantan R.A.R. and Khan, N. (2019). Monitoring the Process Based on Belief Statistic for Neutrosophic Gamma Distributed Product, *Processes*, 7 (4), 209.

Aslam M. (2019). A New Failure-censored Reliability Test Using Neutrosophic Statistical Interval Method, *International Journal of Fuzzy System*, 21 (4), 1214-1220.

Aslam, M. (2019). A New Method to Analyze Rock Joint Roughness Coefficient Based on Neutrosophic Statistics, *Measurement*, 146, 65-71.

Aslam, M., and AL-Marshadi, A. H. (2018). Design of Sampling Plan using Regression Estimator under Indeterminacy, *Symmetry*, 10 (12), 754.

Aslam, M., Bantan, R.A.R. and Khan, N. (2019). Design of a Control Chart for Gamma Distributed Variables under the Indeterminate Environment, *IEEE Access*, 7 (1), 8858-8864.

Aslam, M. and Aldosari, M.S. (2019). Inspection Strategy under Indeterminacy based on Neutrosophic Coefficient of Variation, *Symmetry*, 11 (2), 193.

Dr.

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Profile

Professor of Higher Education at the Naval Royal School of Casablanca Morocco. She obtained (Habilitation) at University Hassan II university in 2016 in partnership with University of POITIERS France and a Doctorate of High Graduate Studies degree at the Hassan II University, Mohammedia in 1999.

Research Interests

Systems engineering, security of system information, neutrosophic graph theory.

List of Publications in Neutrosophics

S. Broumi, A. Bakali, M. Talea , F. Smarandache, V. Uluçay, M. Sahin, A. Dey, M. Dhar, R.P. Tan, A. Bahnasse, S. Pramanik, Neutrosophic Sets: An Overview. In *New Trends in Neutrosophic Theory and Applications*, Volume 2, Pons, Editors: Florentin Smarandache, Surapati Pramanik, 2018, pp. 403-434

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S. Broumi, A. Bakali, M. Talea and F. Smarandache, Shortest Path Problem under Trapezoidal Neutrosophic Information, Computing Conference 2017, 18-20 July 2017, pp142-148.

S. Broumi, A. Bakali, T. Mohamed, F. Smarandache and L. Vladareanu, Shortest Path Problem Under Triangular Fuzzy Neutrosophic Information, 10th International Conference on Software, Knowledge, Information Management & Applications (SKIMA), 2016, pp. 169-174.

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PhD Candidate

Holy-Heavy Msirali Balami

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Profile

Born in Nigeria in 1983. I obtained degree in Mathematics from Ahmadu Bello University Zaria (2003-2007), MSc degree in Mathematics from the same institution in 2013. I also obtained Postgraduate diploma in Education in Usmanu Danfodiyo University Sokoto, Nigeria in 2012. I am currently a PhD scholar in the department of mathematics, University of Abuja, Nigeria. I am at present a lecturer with Nigerian Army University Biu, Borno State, Nigeria. I have published over 40 Journal articles in national and internationally recognized peer-reviewed Journals. I have attended several national and international conferences and published many papers in proceedings. I have supervised many undergraduate projects.

Research Interests

Set, Soft Set, soft multiset, Linear algebra and fractal geometry.

List of Publications in Neutrosophics

H. M. Balami (2019). Neutrosophic Soft set and its Application in Multicriteria Decision Making Problems. *Annals of Fuzzy Mathematics and Informatics*. Accepted for publication.

PhD

Ayoub Banasse

Research

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University Hassan II of Casablanca / MOROCCO

Profile

Obtained Ph.D degree on Networks and telecommunication from university Chouaib Doukkali, Morocco. Professor researcher at ISGA El Jadida,and a researcher associate on LTI Laboratory of FS Ben M'sik and EEA & TI of FST Mohamedia, University Hassan II of Casablanca, Morocco. Outstanding Reviewer on various indexed journals such as ELSEVIER Computer networks, SPRINGER Telecommunication systems, and International Journal of Advanced Computer Science and Applications.etc.Technical program committee on several international conferences: Recent Trends in Computer Science and Electronics(USA), International Conference on Technology, Innovation, Entrepreneurship and Education(UK), International Conference on Green Computing and Engineering Technologies (Denmark). Member on "Big data and Internet of Things project for urban service" project.

Research Interests

Software-defined network; automation of networks; networking; security; smart grids; neutrosophics; mobile learning; machine-learning.

List of Publications in Neutrosophics

> Broumi, Said, Assia Bakali, Mohamed Talea, Florentin Smarandache, Vakkas Uluçay, Mehmet Sahin, Arindam Dey et al. Neutrosophic Sets: An Overview. *New Trends in Neutrosophic Theory and Applications*, Volume II: 413. 2018

Broumi, Said, Kifayat Ullah, Assia Bakali, and Mohamed Talea. Novel System and Method for Telephone Network Planing based on Neutrosophic Graph. Infinite Study, 2018.

Prof. dr.

Ismat Beg

HEC Distinguished National Professor
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Centre for Mathematics and Statistical Sciences
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Profile

Professor of Mathematics at Lahore School of Economics, Lahore. He is also an HEC Distinguished National Professor and an Honorary Full Professor, Institute for Basic Research, Florida (USA). He was a Group Associate Member/Senior Guest Scientist of the Abdul Salam International Centre for Theoretical Physics, Trieste, Italy. He has PhD in Mathematics from University of Bucharest with specialization in functional analysis and operator theory. He has served as Professor in various prestigious Universities/Institutes nationally and internationally. Dr. Beg is an internationally acknowledged scholar, researcher and teacher in the field of mathematical sciences. Dr. Beg is a Fellow of Pakistan Academy of Sciences. His research work has great diversity and is well cited by other researchers. His present research interests are in preference modeling and multi-criteria decision making, the study of fixed point theory, best approximations and fuzzy relations/multi-valued functions.

Dr. Beg has published 270 research journal papers and three books. His total citations are 3814 and his h-index is 33. He has supervised 12 MPhil dissertations, 7 PhD theses and 10 post-doctoral researchers. He was awarded Pakistan Academy of Sciences Gold Medal for research in mathematics in 2008. He was also awarded first prize in mathematics for research by National Book Council of Pakistan, Government of Pakistan in 1986. He has completed as principal investigator 11 research projects.

He has organized 46 conferences. He also attended 78 conferences and delivered lectures at 64 conferences. He is an elected fellow of the Institute of Mathematics and its Applications (UK), a Chartered Mathematician and a Chartered Scientist.

Professor Beg roles as teacher and mentor are also exceptional, and are felt well beyond national boundaries. He has promoted the cause of mathematics in general and of functional analysis in particular by organizing series of symposia, workshops and conferences both national and regional. He is also member of board of studies of several universities. He is member of Editorial Board of fifteen international journals. He is also a reviewer of Zentralblatt Fur Mathematik (Germany), Mathematical Review (USA), The Natural Sciences and Engineering Research Council of Canada and the Ministry of Science and Technology Development (Serbia). Dr. Beg is a member of European Mathematical Society, American Mathematical Society, London Mathematical Society, International Federation of Nonlinear Analysts, International Rough Set Society, Society for Mathematics of Uncertainty, All Pakistan Mathematical Association and Punjab Mathematical Society.

Research Interests

Fuzzy set theory, Multicriteria decision problems, Fixed point theory, Order.

List of Publications in Neutrosophics

S.K. De and I. Beg: Triangular dense fuzzy neutrosophic sets, *Neutrosophic Sets and Systems* (13) (2016), 25-38.

M. Gulistan, I. Beg and N. Yaqoob: Decision making problems under the environment of neutrosophic cubic soft matrices, *J. Intelligent and Fuzzy Systems*, 36(1) (2019), 295- 307.

Dr.

Janani Bharatraj

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Profile

Ph.D. degree from Hindustan Institute of Technology and Science, Chennai, India. M.Phil. (Mathematics) – University of Mysore, Mysore, Karnataka, India. M.Sc. (Mathematics) – University of Mysore, Mysore, India. B.Sc. (Physics, Mathematics, Computer Science) – SBRR Mahajana First Grade College, Affiliated to University of Mysore, Mysore, India.

Research Interests

Fuzzy sets and numbers, Extensions, Neutrosophic sets, MCDM techniques, Aggregation Operators, Fuzzy Trigonometry.

List of Publications in Neutrosophics

M. Clement Joe Anand, Janani Bharatraj (2019) Interval-Valued Neutrosophic Numbers With Waspas, *Fuzzy Multicriteria Decision-Making Using Neutrosophic Sets*, 435-453, Springer Verlag.

Janani Bharatraj, M. Clement Joe Anand (2019) Power Harmonic Weighted Aggregation Operator On Single-Valued Trapezoidal Neutrosophic Number and Interval-Valued Neutrosophic Sets, *Fuzzy Multi-Criteria Decision-Making Using Neutrosophic Sets*, 45-62, Springer Verlag.

PhD. habil.

Marcel-Ioan Boloș

Professor

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Profile

Professor PhD. habil. of the Faculty of Economic Sciences of Oradea, having a doctorate in accounting and another doctorate in management. His scientific work has been materialized in a total of 10 books, over 50 articles published in international specialty journals, two patents for invention and many projects funded by structural funds. He also was Secretary of State in 2012-2017 within the Ministry of Regional Development and Tourism and in the Ministry of Transport.

Research Interests

Fuzzy modelling; International finance; Regional development & transports; Accounting; Finance of public institutions; Corporate governance; Scientific research; Project management.

List of Publications in Neutrosophics

Boloş Marcel-Ioan, Bradea I.A, Sabau-Popa D.C., Detecting Financial Sustainability Risk of The Assets Using Mamdani Fuzzy Controller, Technological and Economic Development of Economy, Vilnius, Lithuania, ISSN: 2029-4913 – in pending for publication

Boloş Marcel-Ioan, Bradea I.A, Delcea C., The Development of a Fuzzy Logic System in Stochastic Environment with Normal Distribution Variables, for Cash Flow Deficits Detection in Corporate Loan Policy, Symmetry-Basel, Switzerland, ISSN: 2073-8994 – in pending for publication

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Boloş Marcel-Ioan, Bradea I.A., Delcea C., Adjusting the errors of the GM (1, 2) grey model in the financial data series using an adaptive fuzzy controller, Grey Systems: Theory and Application, Emerald, vol. 6, issue: 3, pp. 341–352, 2016, ISSN:2043-9377

Boloş Marcel-Ioan, Sabău-Popa C.D., Petru F., Manolescu A., Development of a fuzzy logic system to identify the risk of projects financed from structural funds, International Journal of Computers Communications & Control, vol. 10, issue 4, pp. 480-491, 2015, ISSN 1841-9836, http://univagora.ro/jour/index.php/ijccc/article/view/1914/pdf03042015

Dr.

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Profile

Received the PhD. Degree at University of Kerman, Iran, and has been worked at Department of Mathematics, University of Sistan and Baluchistan, Zahedan, Iran as a (Assistant) Associative Professor (from 1993 to 2007), and he moved at Department of Mathematics, Shahid Beheshti University of, Tehran, Iran as a Full Professor (2007-until now).

He has published more than 215 research papers in several journals (see *http://facultymembers.sbu.ac.ir/borzooei/*) and he spent a one-year sabbatical leave at University of British Columbia, Canada.

His Awards and Honors are: Researcher University in Sistan and Baluchestan University. (2002 and 2004), Top Researcher University in Sistan and Baluchestan University(2005), Appointed Director of Education Planning and Training by Curriculum Planning Association of Iran(2009), Top Vice Chancellor for Education in Universities of Ministry of Science, Research and Technology of Iran(2011), Top Researcher University in Shahid Beheshti University(2013 and 2018).

He does Editorial Board Members are: Managing Editor and Founder: Iranian Journal of Fuzzy Systems(ISI) (Iran)(2002-to date), Editorial Board: International Review of Fuzzy Mathematics (IRFM)(India)(2005-to date), Editorial Board: Advances in Fuzzy Mathematics (AFM)(India)(2005 - to date), Editorial Board: Italian Journal of Pure and Applied Mathematics, (Italy)(2011- to date), Editorial Board: Journal of Algebraic structures and their applications" (ASTA) (Iran)(2013 - to date), Editorial Board: Journal of Categories and General Algebraic

Structures with Applications (Iran)(2013 - to date) and Editorial Board: International Journal of Industrial Mathematics (Iran)(2014 – to date).

Research Interests

Algebra (General Algebra, Logical Algebras, Ordered Algebras); Algebraic Hyperstructures; Fuzzy, soft, rough, vague and Neutrosophic set theory in Algebras; Fuzzy Graphs.

List of Publications in Neutrosophics

R. A. Borzooei, H. Farahani, M. Moniri, Neutrosophic Deductive Filters on BL-Algebras, *Journal of Intelligent and Fuzzy Systems*, 26(6), (2014), 2993-3004.

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Dr.

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Faculty of Cybernetics, Statistics and Economic Informatics
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Profile

      Assistant Professor, Ph.D. at Bucharest University of Economic Studies, Faculty of Cybernetics, Statistics and Economic Informatics. She holds a Master Degree in Finance and a Doctorate in Economic Cybernetics. Her scientific work has been materialized in a total of 6 books and over 30 ISI indexed articles published in international specialty journals. She also is specialized in corporate governance and international financing.

Research Interests

Fuzzy modelling; International finance; Corporate governance; Healthcare management; Agent-based modelling; Risk management; Scientific research; Project management.

List of Publications in Neutrosophics

> Boloş M.I., Ioana-Alexandra Bradea, Delcea C., The Development of a Fuzzy Logic System in Stochastic Environment with Normal Distribution Variables, for Cash Flow Deficits Detection in Corporate Loan Policy, Symmetry-Basel, Switzerland, ISSN: 2073-8994 – in pending for publication

> Boloş M.I., Ioana-Alexandra Bradea, Sabau-Popa D.C., Detecting Financial Sustainability Risk of The Assets Using Mamdani Fuzzy Controller, Technological and Economic Development of Economy, Vilnius, Lithuania, ISSN: 2029-4913 – in pending for publication

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CE, DDiv

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Profile

He was born in Indonesia, and studied engineering in a state university in East Java. In Dec. 2008 he was granted a scholarship to study gravitation and cosmology at Institute of Gravitation and Cosmology in Moscow until June 2009. Since 2005 he has started administering an alternative preprint server, www.sciprint.org until 2009. And since 2009 he started as co-researcher of Prof. Florentin Smarandache, especially in topics related to Neutrosophic Logic, Cosmology, and other issues. Since 2017 he is editor of a theology journal, Amreta. And since 2019 he is a lecturer in Satyabhakti Advanced School of Theology – Jakarta Chapter, Indonesia.

List of Publications in Neutrosophics

The Neutrosophic Logic View to Schrödinger's Cat Paradox. Authors: Florentin Smarandache, V. Christianto, viXra:1003.0040, Journal reference: *Prog. In Phys*. 2006 (www.ptep-online.com)

A Note on Geometric and Information Fusion Interpretation of Bell's Theorem and Quantum Measurement. Authors: Florentin Smarandache, V. Christianto, viXra:1003.0042, Journal reference: *Prog. In Phys.* 2006 (www.ptep-online.com)

The Neutrosophic Logic View to Schrödinger's Cat Paradox, Revisited. Authors: Florentin Smarandache, V. Christianto, viXra:1003.0051, Journal reference: *Prog. In Phys.* 2008 (www.ptep-online.com)

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Applications of Neutrosophic Membership Function in Describing Identity Dynamics in Missiology and Modern Day Ecclesiology (An Exploration in Mathematical Theology). Authors: Victor Christianto, Florentin Smarandache, viXra:1712.0589

Neutrosophic Regression and Possible Nonlinearity of Hubble Law: Some Preliminary Remarks. Authors: Victor Christianto, Florentin Smarandache, viXra:1709.0145

How Many Points Are there in a Line Segment? – a New Answer from Discrete-Cellular Space Viewpoint. Authors: Victor Christianto, Florentin Smarandache, viXra:1708.0445, Journal ref.: *Octogon mathematical magazine*, 2019

How Neutrosophic Logic May Resolve Dispute on the Origin of the Universe Through re-Reading Gen. 1:1-2. Authors: Victor Christianto, Florentin Smarandache, viXra:1803.0719, Journal ref.: *J. Amreta*, vol. 1 no. 2, 2018

Remark on Seven Applications of Neutrosophic Logic: in Cultural Psychology, Economics Theorizing, Conflict Resolution, Philosophy of Science, Etc. Authors: Victor Christianto, Florentin Smarandache, viXra:1811.0439

Journal ref.: Christianto, V.; Smarandache, F. A Review of Seven Applications of Neutrosophic Logic: In Cultural Psychology, Economics Theorizing, Conflict Resolution, Philosophy of Science, etc., J 2019, 2, 128-137. (https://www.mdpi.com/2571-8800/2/2/10)

Remark on Vacuum fluctuation as the Cause of Universe Creation: or How Neutrosophic Logic and Material Point Method May Resolve Dispute on the Origin of the Universe Through re-Reading Gen. 1:1-2. Authors: Victor Christianto, Florentin Smarandache, viXra:1812.0416, Journal ref.: *J. Asia Mathematika* vol. 3 no. 1, april 2019 (http://asiamath.org/article/vol3iss1/AM-1904-3110.html)

An Integral Triune Model of Human Consciousness & Its Implications to Cancer Treatment. Authors: Victor Christianto, Florentin Smarandache, viXra:1901.0014, Journal ref.: JCER, 2019o. www.jcer.com

Remark on Possible Use of Quadruple Neutrosophic Numbers for Realistic Modelling of Physical Systems. Authors: Victor Christianto, Florentin Smarandache, viXra:1904.0348, Journal ref.: submitted to *Indian Journal of Phys.*, not yet accepted

Books

Multi-Valued Logic, Neutrosophy, and Schrödinger Equation. Authors: Florentin Smarandache, V. Christianto, viXra:1003.0031

Unfolding the Labyrinth: Open Problems in Physics, Mathematics, Astrophysics, and Other Areas of Science. Authors: Florentin Smarandache, V. Christianto, Fu Yuhua, Radi I. Khrapko, J. Hutchison, viXra:1003.0027

Neutrosophic Logic, Wave Mechanics, and Other Stories, Authors: Florentin Smarandache, V. Christianto, viXra:0904.0005

Dr.

Bijan Davvaz

Professor

Affiliation
Department of Mathematics
Yazd University
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Profile

Bijan Davvaz took his B.Sc. degree in Applied Mathematics at Shiraz University, Iran in 1988 and his M.Sc. degree in Pure Mathematics at Tehran University in 1990. In 1998, he received his Ph.D. in Mathematics at Tarbiat Modarres University. He is a member of Editorial Boards of 25 Mathematical journals. He is author of around 600 research papers, especially on algebraic hyperstructures and fuzzy logic. He published seven books in algebra. He chosen as the best professor (2009) and distinguished researcher (2011) in Iran. Moreover, he listed among the Highly Cited Researchers published by Thomson Reuters. He is currently Professor of Mathematics at Yazd University in Iran.

Research Interests

Group Theory; Ring Theory; Module Theory, Algebraic Hyperstructures and Their Applications; Lattice Theory; Category Theory: Topology; Soft Computing; Fuzzy Mathematics; Fuzzy Logic; Rough Sets; Soft Sets; Neutrosophic Sets; Probability Theory; Graphs and Combinatorics.

List of Publications in Neutrosophics

A.A.A. Agboola and B. Davvaz, Introduction to Neutrosophic Hypergroups, *ROMAI Journal*, 9(2) (2013) 1-10.

A.A.A. Agboola and B. Davvaz, On neutrosophic canonical hypergroups and neutrosophic hyperrings, *Neutrosophic Sets and Systems*, 2 (2014) 34-41.

A.A.A. Agboola and B. Davvaz, Introduction to Neutrosophic BCI/BCK-Algebras, *Int. J. Math. Math. Sci.* 2015, Art. ID 370267, 6 pp.

A.A.A. Agboola and B. Davvaz, On neutrosophic ideals of neutrosophic BCI-algebras}, *Critical Review*, X (2015) 93-103.

A.A.A. Agboola, B. Davvaz and F. Smarandache, Neutrosophic quadruple algebraic hyperstructures, *Annals of Fuzzy Mathematics and Informatics*, 14(1) (2017) 29-42.

B. Davvaz, S.M. Mostafa and F.F. Kareem, Neutrosophic ideals of neutrosophic KU-algebras, *Gazi University Journal of Science*, 30(4) (2017) 463-472.

Faruk Karaaslana and Bijan Davvaz, Properties of single-valued neutrosophic graphs, *Journal of Intelligent & Fuzzy Systems*, 34 (2018) 57-79.

Muhammad Akram, Saba Siddique and Bijan Davvaz, New concepts in neutrosophic graphs with application, *Journal of Applied Mathematics and Computing*, 57 (2018) 279-302.

Naeem Jan, Kifayat Ullah, Tahir Mahmood, Harish Garg, Bijan Davvaz, Arsham Borumand Saeid, Parvathi Rangasamy and Said Broumi. Some root level modifications in interval valued fuzzy graphs and their generalizations including neutrosophic graphs, *Mathematics*, 2019, 7, 72; doi:10.3390/math7010072.

Dr.

Sujit Kumar De

Associate Professor

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Department of Mathematics
Midnapore College (Autonomous)
Midnapore-721101, West Bengal / INDIA

Profile

Sujit Kumar De did his M.Sc from Vidyasagar university in the year 1995 and completed Ph.D. works on Inventory Management Problems under Fuzzy Environment in the year 2007 from the same university. He served as an Assistant Professor in Mathematics (Bachelor of Education Department) from 2000 to 2008. Currently he is an Associate Professor of Mathematics, Midnapore College (Autonomous). He is also honored as NCTE visiting team member, higher education (Training) department Govt. of India. Dr. De visited colleges in Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Bihar, Rajasthan etc. for granting recognition. He is the reviewer of more than 50 international journals (such as Computers and Industrial Engineering, International journal of fuzzy system, Applied Soft Computing, Journal of Computational Mathematics etc.). He is an editorial board member of the Journal Finance and Market, Universe Scientific Publishers. He got honorary membership "Quarterly Franklin Membership" from "London Journal of Research in Computer Science and Technology (LJRCST)" for the noble research " Triangular Dense Fuzzy Lock Sets" published in " Soft Computing" (IF: 2.367) 2017. He published more than 56 articles in the journals like *Journal of Cleaner Production, Soft Computing, Int. J. of Intelligent Computing and Cybernetics, Opsearch, International Journal of Fuzzy Systems and Rough Systems, International Journal of Systems Science, Journal of Applied Mathematics and Computing, Annals of Pure and Applied Mathematics, Journal of Industrial Engineering International, Economic Modelling, Annals of Operations Research,*

International Journal of Applied Mathematics and Computation, International Journal of Operational Research , Journal of Computational Mathematics, Journal of Industrial Engineering, Pacific Science Review Part A, Man and Life, International Journal of Management Sciences and Engineering Management, International Journal of Systems Science: Operations & Logistics, International Journal of Intelligent Manufacturing, International Journal of Intelligent & Fuzzy systems, Neurtosophic Sets and Systems etc, RAIRO-Operational Research, Mathematics, Sadhana, Journal of Industrial Engineering International etc.

Research Interests

Inventory control/ optimization; Game theory; Transportation Problem; Supply Chain Management under fuzzy system like intuitionistic fuzzy, hesitant fuzzy, Dense fuzzy lock, Cloudy Fuzzy, Monsoon Fuzzy, Volumetric Fuzzy, Deterministic and stochastic (Fuzzy stochastic) environment; Noise Modelling; Environmental Pollution; Industrial Pollution; Disaster Management; Welfare Economics etc. Leadership Theory.

List of Publications in Neutrosophics

> Sujit Kr. De & Ismat Beg. Trianguler dense fuzzy neutrosophic sets. *Neutrosophic sets and systems*, University of New Mexico. Oct. 2016, 13, 24-37.

PhD student

Soumyadip Dhar

Assistant Professor

Affiliation
RCC Institute of Information Technology
Canal South Road ,Beliaghata
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Profile

Received his B.E and M.E degree from University of Burdwan and MAKAUT respectively. Currently he is pursuing Phd. from the university of Calcutta, India. He also holds the position of assistant professor in the department of IT of the RCC Institute of Information Technology, Kolkata,India. His current research interest includes neutrosophic set, Image/video processing & analysis, soft computing, computer vision, machine intelligence and data security. He has contributed several prestigious journals, international conferences and edited books.

List of Publications in Neutrosophics

S. Dhar, and M. K. Kundu. Accurate segmentation of complex document image using digital shearlet transform with neutrosophic set as uncertainty handling tool. *Applied Soft Computing* 61 (2017): 412-426. (Impact Factor: 3.907 Journal Citation Reports)

Dr.

Hojjatollah Farahani

Assistant Professor

Affiliation
Tarbiat Modares University (TMU)
Tehran / IRAN

Profile

Received his PhD in Psychology with Emphasis in Psychometrics from University of Isfahan and he was a postdoctoral fellowship in Advanced Psychometrics at Victoria University (Australia), where he worked on the uncertainty in causal inference.

Research Interests

His research interests and directions include psychometrics, advanced behavioral statistics, innovative computational cognitive modeling, and qualitative methodology, Fuzzy logic and Neutrosophic logic.

List of Publications in Neutrosophics

Farahani, H., Smarandache, F., & Wang, L. (2015). A Comparison of Combined Overlap Block Fuzzy Cognitive Maps (COBFCM) and Combined Overlap Block Neutrosophic Cognitive Map (COBNCM) in finding the hidden patterns and indeterminacies in Psychological Causal Models: Case Study of ADHD. *Critical Review*: A Publication of Society for Mathematics of Uncertainty, 70-84.

Farahani, H., Wang, L., Oles, P. K.(2018). Fuzzy Matrix Model as a new method to find optimal diagnostic validity of psychological tests. Meeting of the European Mathematical Psychology Group (EMPG2018) Genova, Italy, July 30-August 2.

Dr.

Fernando A. F. Ferreira

Associate Professor w/Habilitation
Adjunct Research Professor

Affiliation
ISCTE Business School
University Institute of Lisbon / PORTUGAL
Fogelman College of Business and Economics
University of Memphis, TN / USA

Profile

Dr. Ferreira holds a PhD in Quantitative Methods Applied to Economics and Management from the University of Algarve (Portugal). Some of his works are published in ISI-indexed international journals (e.g., Technological Forecasting & Social Change, IEEE Transactions on Engineering Management, Journal of Business Research, Journal of the Operational Research Society, Annals of Operations Research, Management Decision, International Journal of Information Technology & Decision Making, Service Business, International Journal of Strategic Property Management). He has practical experience as group facilitator and has delivered keynote and invited speeches at conferences across the world (e.g., Mexico, Spain, Hungary, Albania, Japan, South Korea). He has provided consultancy services and executive education to private companies and public sector organizations (e.g., Caixa Geral de Depósitos, S.A. (Portuguese state-owned banking corporation), Infraestruturas de Portugal, S.A. (Portugal's rail and road infrastructure manager), and Fidelidade Insurance Company, S.A. (market leader in Portugal).

Research Interests

His research interests include multiple criteria decision analysis (MCDA), strategic decision making and integrated systems for performance measurement and risk analysis in finance, insurance, banking & real estate.

List of Publications in Neutrosophics

Ferreira, F. & Meidutė-Kavaliauskienė, I. (2019), Toward a sustainable supply chain for social credit: Learning by experience using single-valued neutrosophic sets and fuzzy cognitive maps, *Annals of Operations Research*, DOI: https://doi.org/10.1007/s10479-019-03194-2.

PhD Candidate

Firoz Ahmad

Operational Research Scholar

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Profile

Received Bachelor's degree in Science (Statistics) in 2013 and Master's degree in Science (Operations Research) in 2015 from Aligarh Muslim University Aligarh (India). Awarded with University Gold Medal for standing first in Master's degree program. Currently PhD candidate in Aligarh Muslim University and actively involved in research activity. Published more than seven (07) research articles in reputed national and international journals. Received Best Paper Presentation award in International conference.

Research Interests

Modeling and Optimization under Uncertainty; Multiobjective Optimization Techniques; Neutrosophic Nonlinear Programming Problem, Hesitant Fuzzy Optimization Algorithm; Transportation problems.

List of Publications in Neutrosophics

Ahmad, F., & Adhami, A. Y. (2018). Neutrosophic programming approach to multiobjective nonlinear transportation problem with fuzzy parameters. *International Journal of Management Science and Engineering Management*, 1-12.

Ahmad, F., Adhami, A. Y., & Smarandache, F. (2018). Single Valued Neutrosophic Hesitant Fuzzy Computational Algorithm for Multiobjective Nonlinear Optimization Problem. *Neutrosophic Sets & Systems*, 22.

Ahmad, F., Adhami, A.Y., & Smarandache, F. (2019). Neutrosophic Optimization Model and Computational Algorithm for Optimal Shale Gas Water Management under Uncertainty. *Symmetry*, 11(4), 544.

Mona Gamal Gafar

Lecturer

Affiliation
Faculty of Computers And Information
Kafrelsheikh University / EGYPT

Profile

Born in 1985, Kafr-El-Sheikh, Egypt. B.Sc. in 2006 "Excellent with Honors" Graduation Project : E-Learning, Premaster in 2007 , Master in 2010 title : "Intelligent Hybrid Machine Learning Algorithms In Text Mining Applications" , PHD in 2014 title: "Intelligent Framework Based on Credibility Measure for Uncertain Knowledge", working as a lecturer in faculty of Computer sciences and information systems, Mansoura university, Egypt.

Research Interests

Data Mining, Machine learning, Artificial Intelligence Fuzzy and fuzzy rough systems. Neutrosophic variables definitions, Neutrosophic classification system using neutrosophic data, Optimization and Pattern Recognition.

List of Publications in Neutrosophics

Mona Gamal Gafar, Mohamed Elhoseny, and M. Gunasekaran. Modeling neutrosophic variables based on particle swarm optimization and information theory measures for forest fires. *The Journal of Supercomputing* (2018): 1-18.

H ELwahsh, M Gamal, AA Salama, IM El-Henawy: Modeling Neutrosophic Data by Self-Organizing Feature Map: MANETs Data Case Study - *Procedia Computer Science*, 2017

Mona Gamal Gafar, Ibrahim El-Henawy: Integrated Framework of Optimization Technique and Information Theory

Measures for Modeling Neutrosophic Variables, *Neutrosophic Sets and Systems*, 2017

H Elwahsh, M Gamal, AA Salama, IM El-Henawy, 4. A Novel Approach for Classifying MANETs Attacks with a Neutrosophic Intelligent System based on Genetic Algorithm - *Security and Communication Networks*, 2018

N. Gayathri

Research Candidate

Affiliation
Nirmala College for Women
Coimbatore – 641018
Tamilnadu / INDIA

Profile

B.Sc in Mathematics, from Nirmala College for Women, Bharathiar University, Coimbatore. M.Sc in Mathematics, from Nirmala College for Women, Bharathiar University, Coimbatore. M.Phil degree, from Bharathiar University, Coimbatore, Tamilnadu, India. Since 2015, Assistant Professor in Mathematics Department, Sri Krishna Arts and Science College, Coimbatore, Tamilnadu, India. Currently, working as a Ph.D candidate on Neutrosophic Topology and Vague Topology.

Research Interests

Neutrosophic Topology, Vague Topology and its applications, Fuzzy topological Spaces, Optimization Techniques, General Topology, Graph Theory.

List of Papers Submitted in Neutrosophics

> Neutrosophic Supra Beta Closed Sets In Neutrosophic Supra Topological Spaces (Communicated).

> Neutrosophic Feebly Semi-open and Feebly Semi-closed sets in Neutrosophic Topological Spaces (Communicated).

Dr.

Haitham A. El-Ghareeb

Assistant Professor

Affiliation
Information Systems Department
Faculty of Computers and Information Sciences
Mansoura University / EGYPT

Profile

Member of many distinguished computer organizations, reviewer for different highly recognized academic journals, contributor to open source projects, and the author of different books. Haitham is interested in e-learning, enterprise architecture, information architecture, and software architecture, especially in Service-Oriented Architecture (SOA), Business Process Management (BPM), Business Process Management Systems (BPMS), Information Storage and Management, Virtualization, Cloud Computing, Big Data, and in collaboration with Information Systems and e-Learning organizations and researchers. Holds a Master of Science degree (in 2008) from the same faculty that he is currently working for. His thesis was titled Evaluation of Service Oriented Architecture in e-Learning. This thesis was highly recognized and has been published as an international book under the same title (ISBN-13: 978-3-83835-538-2). He holds a PhD degree (in 2012) from the same faculty. His PhD dissertation was titled Optimizing Service Oriented Architecture to Support e-Learning with Adaptive and Intelligent Features, which was highly recognized and has been published as an international book under the title, Optimizing Service Oriented Architecture to Support e-Learning, (ISBN-13: 978-3-84731-187-4). Haitham is the author of the book Enterprise Integration Opportunities and Challenges, (ISBN-13: 978-3-65937-179-0). Haitham is one of the reviewers of the book Oracle BPM Suite 12c Modeling Patterns, (ISBM-10: 978-1-84968-902-1).

Research Interests

Distributed Information Systems, e-Learning, NoSQL Databases, Blockchain, Image Processing and Computer Vision, Analytic Hierarchy Process, Cloud Computing, Mobile Computing, Operations Research, Neutrosophic Sets and Systems, Personnel Recruitment.

List of Publications in Neutrosophics

N. A. Nabeeh, F. Smarandache, M. Abdel-Basset, H. A. El-Ghareeb, A. Aboelfetouh, (2019). An Integrated Neutrosophic-TOPSIS Approach and Its Application to Personnel Selection: A New Trend in Brain Processing and Analysis, in IEEE Access, vol. 7, pp. 29734-29744. DOI: 10.1109/ACCESS.2019.2899841

N. A. Nabeeh, M. Abdel-Basset, H. A. El-Ghareeb, A. Aboelfetouh, (2019). Neutrosophic Multi-Criteria Decision Making Approach for IoT-Based Enterprises, in IEEE Access. DOI: 10.1109/ACCESS.2019.2908919

El-Ghareeb, Haitham A. (2019). Novel Open Source Python Neutrosophic Package. *Neutrosophic Sets and Systems*, Vol. 25, pp. 136.

M. Abdel-Basset, N. A. Nabeeh, H. A. El-Ghareeb, A. Aboelfetouh, (2019). Utilizing Neutrosophic Theory to Solve Transition Difficulties of IoT-Based Enterprises, *Enterprise Information Systems*, DOI: 10.1080/17517575.2019.1633690

Dr.

Sergey V. Gorbachev

Candidate of Technical Science

Affiliation
Senior Researcher of the International Laboratory
«Systems of technical vision»,
Department of Innovative Technologies
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Profile

High Diploma with Honors in Engineer-Mathematician, Department of Applied Mathematics and Cybernetics of the National research Tomsk state University, 1993. PhD-student in Mathematical modeling, numerical methods and program complexes of Tomsk state University, Department of Applied Mathematics and Cybernetics, since 2000. Theme of the candidate dissertation: «Development of interpretive mapping system «InformGeo» for the forecast of oil-bearing deposits». Doctoral student in Theoretical foundations of informatics of Tomsk state University, Department of Applied Mathematics and Cybernetics, since 2013. Theme of doctor dissertation: «Development of integrated boosting model of decision support based on hybrid methods of deep learning». Senior Researcher of the International Laboratory «Systems of technical vision», Department of Innovative Technologies, National research Tomsk state University, 2013 – present.

Gorbachev is the author and co-author of the 90 scientific publications, including 15 papers in journals indexed by Web of Science and Scopus, 2 patents, 16 certificates of registration of computer programs, 9 monographs, 2 manuals. The research results were awarded with 10 gold and silver medals and diplomas at international exhibitions.

Gorbachev is the head of the grant № 16-29-12858 «The development of intellectual multi-level system of efficiency and risk analysis of scientific and technical solutions, technologies, research projects, based on neuro-

fuzzy classifier and a method of the analysis of hierarchies» of Russian Foundation for Basic Research, 2016 – present.

Research Interests

Neutrosophic Cognitive Maps; Intellectual Analysis of Multidimensional Poorly Formalized Data; Deep Learning Forecasting Neural Networks; Fuzzy Logic; Hybrid Deep Learning Models; Neuro-Fuzzy Decision Trees; Cognitive Analysis; Management of Complex Objects; Foresight Methods; Technological Analysis.

List of Publications in Neutrosophics

Gorbachev S.V. Metod Kognitivnogo Modelirovanija v Slabostrukturirovannoj srede // Materialy mezhdunarodnoj konferencii «Kognitivnaja robototehnika» pod red. prof. V.I. Syrjamkina, A.V. Jurchenko; Tomskij gosudarstvennyj universitet. Chast' 1. – Tomsk: Izd-vo Tomskogo gosudarstvennogo universiteta, 7–10 dekabrja 2016, s.25-26

Gorbachev S.V. Intellectual''nye Forsajt-instrumenty na Osnove Nechetkogo Kognitivnogo Modelirovanija v Slabostrukturirovannoj srede // Materialy mezhdunarodnoj konferencii «Kognitivnaja robototehnika» pod red. prof. V.I. Syrjamkina, A.V. Jurchenko; Tomskij gosudarstvennyj universitet. Chast' 1. – Tomsk: Izd-vo Tomskogo gosudarstvennogo universiteta, 7–10 dekabrja 2016, s.120-129

Sergey Gorbachev Intellectual Multi-Level System for Neuro-Fuzzy and Cognitive Analysis and Forecast of Scientific-Technological and Innovative Development. MATEC Web of Conferences, 2018. – Vol. 155. – Article number 01037. – 7 p.

Sergey Gorbachev, Tatyana Abramova Design of Fuzzy Cognitive Model of Mutual Influence and Connectivity of Innovative Technologies. *Journal of Modeling and Optimization*, 2018. – Volume 10. – Number 1. – pp. 1-7. – ISSN 1759-7676

T.V. Abramova Multi-disciplinary deep learning neuro-fuzzy and cognitive researches of scientific, technological and innovative development of objects, territories. pod red. S.V. Gorbacheva, Computer Science Advances: Research and Applications, Nova Science Publishers, Inc., New York, USA, 2019. – Ch. 1. – pp. 1-15

Dr.

Muhammad Gulistan

Assistant Professor

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Department of Mathematics
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Khyber Pakhtunkhwa / PAKISTAN

Profile

MSc in mathematics from Hazara University in 2008, M.Phil in pure Mathematics from Quaid-e-Azam University Islamabad in 2011 and PhD in pure Mathematics from Hazara University in 2015. Currently serving as a Assistant professor in department of Mathematics and Statistics in Hazara University. He has published more than 40 research papers in different journals like symmetry, journal of intelligent and fuzzy systems, Discrete Dynamics in Nature and Society, International Journal of Analysis and Applications, International Journal for Uncertainty Quantification, Fuzzy Information and Engineering. He is the Papers He review papers for many journals, like Neural Computing and Applications, New Trends in Mathematical Sciences, International Journal of Algebra and Statistics, Songklanakarin Journal of Science and Technology (SJST), Journal of the Egyptian Mathematical Society, Africa Mathematica, Egyptian journal of basic and applied sciences, Fuzzy information and engineering, Annals of fuzzy mathematics and informatics and Facta mathematica.

Research Interests

In 1965, L.A. Zadeh introduced the concept of fuzzy set. After this concept many researchers/Mathematicians engaged to fuzzy set theory. A. Rosenfeld was studied fuzzy subgroups of a group. After the concept of fuzzy subgroups, many researcher/Mathematicians applied fuzzy theory

to algebra. In 1986, K.T. Atanassov introduced the notion of an intuitionistic fuzzy set, which is a generalization of Zadeh fuzzy set. In 2011 Jun et. al introduced the idea of cubic sets which is the generalization of intuitionistic fuzzy sets. The presences of indeterminacy in different world problems, neutrosophy initiates it was into the modern research. It is the branch of philosophy and is the generalization of the fuzzy set, presented by Smarandache in 1998, which is the base of neutrosophic logic and is the addition of the fuzzy logic in which indeterminacy is involved. I am interesting in Algebraic structures of (semigroup, semihypergoup, LA-semigroups, LA-semihypergoup, Polygroups etc) in terms of neutrosophic sets and neutrosophic cubic sets. Further I am working in decision making problems, graphs theory in terms of neutrosophic and neutrosophic cubic sets.

List of Publications in Neutrosophics

J. Zhan, M. Khan, M. Gulistan and A. Ali, Applications of neutrosophic cubic sets in multi-criteria decision-making, *Int. J. Uncertainty Quantification* 7(5) (2017) 377-394.

M. Gulistan, N. Yaqoob, Z. Rashid, F. Smarandache and H. A. Wahab, A Study on Neutrosophic Cubic Graphs with Real Life Applications in Industries, *Symmetry* 2018, 10, 203; doi:10.3390/sym10060203.

M. Khan, M. Gulistan, N. Yaqoob and M. Shabir, Neutrosophic cubic (a,b)-ideals in semigroups with application, *Journal of Intelligent and Fuzzy Systems*, 35(2) (2018) 2469-2483.

M. Gulistan, A. Khan, A. Abdullah and N. Yaqoob, Complex Neutrosophic Subsemigroups and Ideals, *International Journal of Analysis and Applications* 16 (1) (2018) 97-116.

R. M. Hashim, M. Gulistan and F. Smarandache, Applications of neutrosophic Bipolar fuzzy sets in HOPE Foundation for Planning to Build a Children Hospital with Different Types of Similarity Measures, *Symmetry*, 2018, 10(8), 331.

M. Gulistan, A new approach in decision making problems under the environment of neutrosophic cubic soft matrices, *Journal of Intelligent and Fuzzy Systems*, accepted.

Hina Gulzar

M-Phil student

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Department of Mathematics
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54590 - Lahore / PAKISTAN

Profile

B. SC (Double Mathematics, Statistics) / Punjab College for Women, Mian Zia-ul Haq road, civil lines, Gujranwala, Pakistan (From 2012 to 2014). M. SC (Mathematics) / Govt College for Boys, Gujranwala, Pakistan, Gujranwala, Pakistan (from 2014 to 2016). M. Phil (Mathematics) / University of the Punjab , Lahore, Pakistan (from 2017 to 2019).

Research Interests

K-Algebras, Neutrosophic sets. Soft Sets, Topology.

List of Publications in Neutrosophics

Certain Notions of Neutrosophic Topological K-Algebras (*Mathematics*, 6(11) (2018), 234, https://doi.org/10.3390/math6110234) .

Application of Neutrosophic Soft Sets to K-Algebras (*Axioms*, 7(4) 2018, 83, https:/ /doi.org/10.3390/axioms7040083) .

Single-Valued Neutrosophic Lie Algebras (*Journal of Mathematical Research with Applications*, 39(2)(2019), 141152, DOI:10.3770/j.issn:20952651.2019.02.003) .

Certain Notions of Single-Valued Neutrosophic K-Algebras (*Italian Journal of Pured and Applied Mathematics*, 41(1)(2019).

Neutrosophic Soft Topological K-Algebras (*Neutrosophic Sets and Systems* (2019),104).

Charu Gupta

Assistant Professor

Affiliation
Computer Science and Engineering Department
Bhagwan Parshuram Institute of Technology,
Rohini, Delhi / INDIA

Profile

Born in India in 1987. Graduated B.E. in Computer Science and Engineering in 2009 and completed M.Tech from JSS Academy of Technical Education, Noida in Computer Science and Engineering, in 2011 with Honors. Pursuing Doctoral degree from the Department of Computer Science, Banasthali Vidyapith, Rajasthan, India under the supervision of Dr. Nisheeth Joshi and Dr. Amita Jain. Presently serving as assistant professor at Bhagwan Parshuram Institute of Technology (Affiliated to GGSIPU, Dwarka), Rohini, Delhi with a teaching experience of 8 years. She has to her credit research publications in various National and International Journals/Conferences of repute.

Research Interests

Natural Language Processing, Neutrosophic logic and its applications, Evolutionary Computation, and Information Retrieval.

List of Publications in Neutrosophics

Amita Jain, Basanti Pal Nandi, Charu Gupta, Devendra Kumar Tayal, A Hybrid Framework based on PSO and Neutrosophic Set for Document level Sentiment Analysis, 2nd International Conference on Information Technology and Applied Mathematics (ICITAM, March 2019)

Kawther Fawzi Hamza Alhasan

Assistant Professor

Affiliation
Department of Mathematics
College of Education for Pure Science
Babylon university / IRAQ

Profile

Born on 16/11/1981 in Thi-Qar /Iraq. BA from the Department of Mathematics, College of Education for pure science, Babylon University (2003). MSc from the same university(2006).

Ms. Hamza teaching various academic material in the department of mathematics such as   mathematical statistic, probability, physical mathematics,…. for graduate and undergraduate students. Ms. Famza has exceptional knowledge and experience in teaching curriculum to develop scientific research for undergraduate students and has conveyed this knowledge to her students in a professional manner. She has been an active member on several committees either to assess graduation researches and other committees and panels related to the managerial aspects of the department.

Ms. Hamza started developing ideas for future researches and therefore published several researches in (Bayesian ranking selection and approximation) in various international and national journals and participated in international and national conferences and workshops. She has extensive knowledge in Neutrosophy field which is a new approach to logic and she is a honorary membership of Neutrosophic Science International Association as of (2017).

Research Interests

Neutrosophy; Neutrosophic Probability; Neutrosophic Statistics; Fuzzy Theory; Graph Theory; Approximation; Bayesian approach.

List of Publications in Neutrosophics

A Journey to Neutrosophy, by K.F. Hamza, seminar, Department of Mathematics in College of Education for Pure Science, 17-12-2018.
http://purescience.uobabylon.edu.iq/action_news.aspx?nwid=41603

Neutrosophy: A new approach of philosophy, video lecture by Kawther Fawzi, University of Babylon, College of Education for Pure Science, Iraq, 20 February 2019.
http://37.98.229.102/mmc/show.php?v=650&title=Neutrosophy%20a%20new%20approach

Kawther Fawzi, Florentin Smarandache. Neutrosophic Weibull distribution and neutrosophic family Weibull distribution (submitted)

Working on translation from English to Arabic of *Introduction to Neutrosophic Measure, Neutrosophic Integral, and Neutrosophic Probability*, by Florentin Smarandache.

PhD Candidate

Hazwani Hashim

Lecturer

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Faculty of Computer and Mathematical Sciences
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Profile

MSc in Applied Mathematics, BSc in Management Mathematics and Diploma in Quantitative Sciences from Universiti Teknologi Mara (UiTM). Currently, working as a mathematic lecturer at Faculty of Computer and Mathematical Sciences, UiTM Campus Machang, Malaysia.

Research Interests

Fuzzy Set, Neutrosophic Set, Vague Sets, Multi Criteria- Decision Making.

Neutrosophic Research

Study on Neutrosophic Sets by combining Interval Neutrosophic Sets and Vague Sets (INVSs) and its application in Multi Criteria Decision Making.

List of Publications in Neutrosophics

Hashim, H., Abdullah, L., & Al-Quran, A. (2019). Interval Neutrosophic Vague Sets. *Neutrosophic Sets and Systems*, Vol. 25

S. Satham Hussain

Full Time Research Scholar

Affiliation
PG & Research Department of Mathematics
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Tiruchirappalli – 20, Tamil Nadu / INDIA

Profile

Received Bachelor of Science in Mathematics in 2012, Master of Science in Mathematics in 2014 and Master of philosophy in Mathematics 2016 from the Madurai Kamaraj University, Madurai, India. Now pursuing Doctoral degree from the Department of Mathematics, Jamal Mohamed College, Tiruchirappalli, under the supervision of Dr. R. Jahir Hussain with the research topic "Neutrosophic Graph Theory".

Research Interests

Fuzzy graph theory and its extension, Neutrosophic sets, Neutrosophic Graphs.

List of Publications in Neutrosophics

R. Jahir Hussain, S. Satham Hussain "Various Domination parmeters of Single Valued Neutrosophic Graphs" *International Journal of Research in Advent Technology*, Vol. 7, No.1, January 2019, E.ISSN:2321-9637.

S. Satham Hussain, R. Jahir Hussain and Florentin Smarandache, "Domination in Neutrosophic Soft graphs", *Neutrsophic sets and systems*, May 2019 (Submitted)

S. Satham Hussain, R. Jahir Hussain and Florentin Smarandache, "On Neutrosophic Vague graphs", *Neutrosophic sets and systems*, April 2019 (Submitted)

Qays Hatem Imran

Assistant Professor
Head of Department of Mathematics

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Al Muthanna University
Samawah / IRAQ

Profile

   B.Sc. with Grade Very good in Mathematics from University of Babylon, College of Education for Pure Science, Babil, Iraq, 2008. M.Sc. in Mathematics from University of Babylon, College of Education for Pure Science, Babil, Iraq, 2010. Faculty Member as Assistant Lecturer in Al Muthanna University, College of Education for Pure Science, Department of Mathematics, Samawah, Iraq, 2011. Assistant Professor and Head of Department of Mathematics in Al Muthanna University, College of Education for Pure Science from 26/09/2018 to up now.

Research Interests

Topological Spaces, Bitopological Spaces, Tri-topological Spaces, Fuzzy Topological Spaces, Nano Topological Spaces, Neutrosophic Topological Spaces, Neutrosophic Crisp Topological Spaces, Topological Groups and Bitopological Groups.

List of Publications in Neutrosophics

   Imran, Q.H., F. Smarandache, R.K. Al-Hamido and R. Dhavaseelan, 2017. On Neutrosophic Semi Alpha Open Sets, *Neutrosophic Sets and Systems*, vol.18, p.37-42. http://doi.org/10.5281/zenodo.1175168.

   Al-Hamido, R.K., Q.H. Imran, K.A. Alghurabi and T. Gharibah, 2018. On Neutrosophic Crisp Semi Alpha Closed Sets, *Neutrosophic Sets and Systems*, vol.21, p.28-35. https://doi.org/10.5281/zenodo.1408716.

Dr.

Amita Jain

Assistant Professor

Affiliation
Computer Science and Engineering Department
Ambedkar Institute of Advanced
Communication Technologies& Research
Geeta Colony, Delhi / INDIA

Profile

Dr. Amita Jain is B.E., M. Tech. (Computer Science & Technology) and Ph.D (Computer Science & Technology). She did her M.Tech from GGSIP University Delhi and Ph.D. from Jawaharlal Nehru University Delhi. She is having more than 16 years teaching and research experience. She is selected through UPSC and working as an Assistant Professor in the Department Computer Science & Engineering at Ambedkar Institute of Advanced Communication Technologies and Research, Govt. of NCT of Delhi, India. She has published more than 65 research papers in highly reputed International Journals and conferences including ACM Transactions, IEEE, Elsevier, Springer etc. She is also a reviewer on the panel of many international journals including IEEE, ACM, Elsevier etc. She is currently supervising PhD in the field of Fuzzy Logic, Information Retrieval, Natural Language Processing etc. She has organized and delivered many talks in International Conferences, Seminars and Workshops etc.

Research Interests

Natural Language Processing, Neutrosophic logic and its applications, Information Retrieval.

List of Publications in Neutrosophics

> Amita Jain, Basanti Pal Nandi, "Intuitionistic and Neutrosophic Fuzzy Logic: Basic Concepts and Applications", Hybrid Intelligent Systems in Control, *Pattern Recognition and Medicine*, Springer Verlag(2019).

Conferences

> Amita Jain, Basanti Pal Nandi, Charu Gupta,Devendra KumarTayal, "A Hybrid Framework based on PSOand Neutrosophic Set for Document level Sentiment Analysis", 2nd International Conference on Information Technology and Applied Mathematics (ICITAM, March 2019).

K. Ludi Jancy Jenifer

Ph.D Student

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Nirmala College for Women, Coimbatore / INDIA

Profile

   Research Scholar, Currently pursuing Ph.D in Nirmala College for Women, Coimbatore, India.

Research Interests

Graph theory, Supra topology, Neutrosophic hesitant sets.

List of Publications in Neutrosophics

>   K. Ludi Jancy Jenifer, M. Helen, Florentin Smarandache, "Neutrosophic Hesitant Sets and Neutrosophic Hesitant Topological Spaces", *American International Journal of Research in Science and Technology*, Engineering and Mathematics, Special issue.

Conferences

>   "Neutrosophic Hesitant Sets and Neutrosophic Hesitant Topological Spaces"- 2nd International Conference in Current Scenario in Pure and Applied Mathematics- January 2019, Kongunadu College of Arts and Science, Coimbatore, India

Chaitali Kar

Research Scholar

Affiliation
Department of Mathematics
Indian Institute of Engineering Science and Technology (IIEST)
Shibpur, Howrah- 711103, West Bengal / INDIA

Profile

Bachelor of Science in Mathematics in 2013 from Bankura Sammilani College, University of Burdwan, West Bengal, India and Master of Science in Mathematics in 2015 from Indian Institute of Engineering Science and Technology, Shibpur, West Bengal, India. Currently working as a research scholar in the Department of Mathematics, Indian Institute of Engineering Science and Technology, Shibpur, under the guidance of Dr. Tapan Kumar Roy and Dr. Manoranjan Maiti.

Research Interests

Neutrosophic set, Neutrosophic number, Inventory models, Transportation problems under neutrosophic environment.

List of Publications in Neutrosophics

Chaitali Kar, Bappa Mondal, Tapan Kumar Roy, An inventory model under space constraint in neutrosophic environment: A neutrosophic geometric programming approach, 2018, *Neutrosophic Sets and Systems*.

Bappa Mondal, Chaitali Kar, Arindam Garai, Tapan Kumar Roy, Optimization of EOQ model with limited storage capacity by neutrosophic geometric programming, 2018, *Neutrosophic Sets and Systems*.

Mohsin Khan

Ph.D Student

Affiliation
College of Mathematical Sciences, Shou Xi Hu Campus
Yangzhou University / P.R. CHINA

Profile

Born in April, 10th, 1988, in Pakistan. I did BSc in Matheamtics and Computer Science from Post Graduate College Mardan (2006-2008). MSc in Mathematics from Abdul Wali Khan University, Mardan (2009-2011). And also did MPhil in Mathematics from Abdul Wali Khan University, Mardan (2013-2015). Now doing PhD from Yangzhou University (22500) China.

Research Interests

Fuzzy sets, intuitionistic fuzzy sets, neutrosophic sets, neutrosophic graphs.

List of Publications in Neutrosophics

M. Ali, Le Hoang Son, M. Khan, Nguyen Thanh Tung, Segmentation of Dental X-ray Images in Medical Imaging using Neutrosophic Orthogonal Matrices, *Expert System With Applications* 91 (2017) 434-441.

Said Broumi, Assia Bakali, Mohamed Talea, F. Smarandache, M. Khan, A Bipolar Single Valued Neutrosophic Isolated Graphs: Revisited, *International Journal of New Computer Architectures and their Applications* (IJNCAA) 7(3): 89-94.

M. Ali, F. Smarandache, M. Khan, 'Study on the development of Neutrosophic Triplet Ring and Neutrosophic Triplet Field', *Mathematics* (MDPI), 2018.

M. Khan, L. H. Son, M. Ali, Hoang Thi Nhu Na, Nguyen Thi Na, F. Smarandache, Systematic Review of Decision Making Making Algorithms in Extended Neutrosophic Sets, *Symmetry* 10(8):314.

Hoang Viet Long, M. Ali, Le Hoang Son, M. Khan, Doan Ngoc Tu, A Novel Approach For Fuzzy Clustering Based on Neutrosophic Association Matrix, *Computers & Industrial Engineering* Vol (127), January 2019, 687-697.

Book Chapters

M. Ali, F. Smarandache, M. Khan, Arithmetic Operations of Neutrosophic Set, Interval Neutrosophic Set and Rough Neutrosophic Set, Studies in Fuzziness and Soft Computing, Vol (369), p 25-42, 2018.

M. Khan, S. Umar, S. Broumi, Laplacian Energy of a Complex Neutrosophic Graph, Studies in Fuzziness and Soft Computing, Vol (369), p 203-232, 2018.

Said Broumi, Assia Bakali, Mohamed Talea, F. Smarandache, Vakkas Uluçay, M. Khan, Bipolar Complex Neutrosophic Sets and its Application in Decision Making Problem, Studies in Fuzziness and Soft Computing, Vol (369), p 677-710, 2018.

Dr.
Malay K. Kundu

Professor

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Profile

Received his B. Tech., M. Tech. and Ph.D (Tech.) degrees in Radio physics and Electronics all are from the University of Calcutta. In 1982, he joined the Indian Statistical Institute (ISI), Calcutta, as a faculty member. He superannuated from the service of the institute as Full Professor in December 2013 and became INAE distinguished chair professor in the Machine Intelligence Unit (MIU) of this Institute till 2016. Currently, he is a visiting professor at the MIU, ISI, Kolkata.

He is a Fellow of the International Association for Pattern Recognition, USA (FIAPR), Indian National Academy of Engineering (FNAE), National Academy of Sciences (FNASc.), India and the Institute of Electronics and Telecommunication Engineers (FIETE), India. He has contributed 6 edited book volumes, about 150 research papers in well known and prestigious archival journals, international refereed conferences and in the edited monograph volumes. He is the holder of ten U.S patents, three International and two E.U patents.

Research Interests

Digital image processing, Machine learning, Content Based Image Retrieval, Computational Intelligence, Wavelets, Video processing & analysis and Computer vision.

List of Publications in Neutrosophics

S.Dhar, and M.K. Kundu. "Accurate segmentation of complex document image using digital shearlet transform with neutrosophic set as uncertainty handling tool." *Applied Soft Computing* 61 (2017): 412-426. (Impact Factor: 3.907 Journal Citation Reports)

M. Lathamaheswari

Assistant Professor

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Hindustan Institute of Technology and Science
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Profile

B.Sc from Bharathidasan University, India in 2001. M.Sc from Bharathidasan University, India in 2003, M.Phil from Bharathidasan University, India in 2005. Thesis submitted in March 2019, Hindustan Institute of Technology and Science, Chennai. Attended workshops and conferences. Presented papers in national and international conferences. Published more than 10 papers in high quality journals.

Research Interests

Modeling and Optimization under Uncertainty; Interval Neutrosophic Sets; Interval Neutrosophic Graph; Interval Neutrosophic Optimization Algorithm; Interval Neutrosophic Aggregation Operators.

List of Publications in Neutrosophics

> D. Nagarajan, M.Lathamaheswari, Said Broumi J. Kavikumar (2019). A New Perspective on Traffic Control Management Using Triangular Interval Type-2 Fuzzy Sets and Interval Neutrosophic Sets, *Operations Research Perspectives*.

> D. Nagarajan, M.Lathamaheswari, Said Broumi J. Kavikumar (2019) Blockchain Single and Interval Valued Neutrosophic Graph, *Neutrosophic Sets and Systems*. DOI: 10.5281/zenodo.2593909

> D. Nagarajan, M.Lathamaheswari, Said Broumi J. Kavikumar (2019). Dombi interval valued neutrosophic graphs and its

role in traffic control management, *Neutrosophic Sets and Systems*. DOI: 10.5281/zenodo.2593948

S. Broumi, D. Nagarajan, Assia Bakali, Mohamed Talea, Florentin Smarandache, M.Lathamaheswari. (2019) The Shortest Path Problem In Interval Valued Trapezoidal and Triangular Neutrosophic Environment, *Complex and Intelligent Systems*, https://doi.org/10.1007/s40747-019-0092-5.

Broumi, S., Talea, M., Bakali, A., Smarandache, F., Lathamaheswari, M. and Nagarajan, D. (2019). Shortest Path Problem in Fuzzy, Intuitionistic Fuzzy and Neutrosophic Environment: An Overview. *Complex and Intelligent Systems*, https://doi.org/10.1007/s40747-019-0098-z.

Broumi, S., Dey, A., Talea, M., Bakali, A., Smarandache, F., Nagarajan, D., Lathamaheswari, M. and Kumar, R. (2019). Shortest path problem using Bellman algorithm under neutrosophic environment. *Complex and Intelligent Systems*, https://doi.org/10.1007/s40747-019-0101-8.

Nagarajan, D., Tamizhi, T., Lathamaheswari, M. and Kavikumar, J. (2019) Traffic Control Management using Gauss Jordan Method under Neutrosophic Environment. The 11th National Conference on Mathematical Techniques and Applications AIP Conf. Proc. 2112, 020060-1–020060-6; https://doi.org/10.1063/1.5112245.

Dr.

Xingsen Li

Professor of Management Science and Extenics

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Research Institute of Extenics and Innovation Methods
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510006, Guangzhou / P.R.CHINA

Profile

Graduated from School of Management, Graduate University of the Chinese Academy of Sciences and achieved his doctorate degree in management science and engineering in 2008. MSc degree in Mechanical Design and its Theory, School of Mechanical Electronic Engineering, China University of Mining & Technology in 2000. B.S. in Vehicular Engineering, Energy Engineering Department, Zhejiang University in 1991. He has been the secretary-general of Extenics Specialized Committee, China Association of Artificial Intelligence. He has published 4 books and more than 90 papers in various Chinese journals and international journals/conferences proceedings, including ITQM best paper and ESI highly cited paper. He wins 2017 Herbert Simon Award for outstanding contribution in information technology and decision-making, natural science awards of Zhejiang province and teaching achievement prizes at Zhejiang University.

Research Interests

Extenics; Extension Set; Intelligent Knowledge Management; Extension Data mining; Customer Churn; Factor Space; Intelligent innovation.

Neutrosophic Research

Neutrosophic Set and Extension Set; Neutrosophic Decision Making Model.

List of Publications in Neutrosophics

Libo Xu, Xingsen Li, Chaoyi Pang and Yan Guo, Simplified Neutrosophic Sets Based on Interval Dependent Degree for Multi-Criteria Group Decision-Making Problems, *Symmetry*, 2018, 10(11), 640:1-15; https://doi.org/10.3390/sym10110640

Dr.

Yingcang Ma

Professor of Mathematics

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Shaanxi Province 710048 / P.R. CHINA

Profile

Bachelor Degree on Mathematics Education from Shaanxi Normal University (1995). Master degree on Basic Mathematics from Shaanxi Normal University (2000). PhD degree on Computer science and Software at Northwestern Polytecnical University (2006). Between Jan. 2015– Jan. 2016, visiting scholar in University of Nebraska at Omaha, NE, USA. Currently, Professor at School of Science, Xi'an Polytechnic University. Committee Member of Mathematical Society of Shaanxi Province.

Research Interests

Neutrosophic Set; Neutrosophic extended triplet group; Generalized neutrosophic extended triplet group; Machine Learning.

List of Publications in Neutrosophics

> Ma Yingcang, Zhang Xiaohong, Yang Xiaofei.; Zhou Xin. Generalized Neutrosophic Extended Triplet Group. *Symmetry*, 2019, 11, 327.

> Li Qiaoyan, Ma Yingcang, Smarandache Florentin, Zhu Shuangwu. Single-Valued Neutrosophic Clustering Algorithm Based on Tsallis Entropy Maximization. *Axioms*, 2018, 7, 57.

> Ma Yingcang, Zhou Wanying, Wan Qing, Covering-Based Rough Single Valued Neutrosophic Sets, *Neutrosophic Sets and Systems*, Vol. 17, 2017, 3-9.

Dr.

Mladjan Maksimovic

Assistant Professor

Affiliation
Faculty of Applied Management, Economics and Finance Belgrade
University Business Academy in Novi Sad
Belgrade / SERBIA

Profile

Chairman of the Quality Committee and an Assistant Professor of Management and Informatics at the Faculty of Applied Management, Economics and Finance, University Business Academy in Novi Sad. His current research is focused on the informatics, management and quality. He has published a number of papers in the journals such as: Informatica, Minerals Engineering, Transformations in Business and Economics, etc.

Research Interests

Informatics, management and quality.

List of Publications in Neutrosophics

Stanujkic, D., Karabasevic, D., Smarandache, F., Zavadskas, E.K., & Maksimovic, M. (2019). An Innovative Approach to Evaluation of the Quality of Websites in the Tourism Industry: a Novel MCDM Approach Based on Bipolar Neutrosophic Numbers and the Hamming Distance. Transformations in Business & Economics, 18(1), 149-162.

Akansha Mishra

Research Scholar

Affiliation
Thapar Institute of Engineering & Technology
Patiala, Punjab / INDIA

Profile

Bachelor in Sciences from D.G.P.G. College, Kanpur, India and M.Sc. in Mathematics from Visvesvaraya National Institute of Technology, Nagpur, India. Perusing Ph.D. from Thapar Institute of Engineering & Technology, Patiala, Punjab, India.

Research Interests

Fuzzy optimization; aggregation operators for various extensions of fuzzy set; fuzzy transportation problems.

List of Publications in Neutrosophics

- A. Mishra. A note on "Novel single-valued neutrosophic aggregated operators under frank norm operation and its application to decision-making process", *International Journal for Uncertainty Quantification*, (2018) Vol. 8 (2), pp. 119-121.

- A. Mishra, A. Kumar. Commentary on "New aggregation operators of single-valued neutrosophic hesitant fuzzy set and their application in multi-attribute decision making", *Pattern Analysis and Applications*, DOI: 10.1007/s10044-018-0718-z

Dr.

Sankar Prasad Mondal

Assistant Professor

Affiliation
Department of Natural Science
Maulana Abul Kalam Azad University of Technology
West Bengal / INDIA

Profile

Dr. Sankar Prasad Mondal is an Assistant Professor in the Department of Natural Science in Maulana Abul Kalam Azad University of Technology, West Bengal, India. Previously he was working as an Assistant Professor in the department of Mathematics in Midnapore College (Autonomous) and National Institute of Technology, Agartala. He is having 5 years of teaching and 9 years of research experience in the field of operations research, differential equation, fuzzy sets, mathematical biology, fuzzy differential equation, Soft Computing, Artificial Indigence, Optimization theory. He already published 51 research paper in reputed journals, 10 books chapter and 2 conference paper.

Research Interests

Soft Computing, Artificial Indigence, Optimization.

List of Publications in Neutrosophics

> Avishek Chakraborty, Sankar Prasad Mondal, Ali Ahmadian, Norazak Senu, Shariful Alam, Soheil Salahshour: Different Forms of Triangular Neutrosophic Numbers, De-Neutrosophication Techniques, and their Applications. *Symmetry* (SCIE 1.256) 10(8): 327 (2018)

Books Chapter

> Sankar Prasad Mondal, Syed Abou Iltaf Hussain, Binayak Sen, Uttam Kumar Mandal, Linear and Non-linear Neutrosophic Numbers, Fuzzy Multi-criteria Decision-

Making Using Neutrosophic Sets (Springer), 2018, pp 63-78

Syed Abou Iltaf Hussain, Sankar Prasad Mondal, Uttam Kumar Mandal, VIKOR Method for Decision Making Problems in Interval Valued Neutrosophic Environment, Fuzzy Multi-criteria Decision-Making Using Neutrosophic Sets (Springer), 2018, pp 587-602

Dr.

G. Muhiuddin

Associate Professor

Affiliation
Department of Mathematics
University of Tabuk
Tabuk 71491 / SAUDI ARABIA

Profile

Dr. G. Muhiuddin Chishty is working at the Department of Mathematics, University of Tabuk, Saudi Arabia as an Associate Professor. He received his Ph.D. and M. Phil. in Pure Mathematics, more specifically, in Algebra with specialization in Category Theory. His mathematical research areas include Algebras related to logic (BCK, BCI, BCC-algebras, Hilbert algebras, and implication algebras), Fuzzy logical algebras, Theory of derivations in algebraic structures and Category theory. He serves as an expert referee for several research papers in these areas of his expertise. He also serves as reviewer for Mathematics Reviews of the American Math Society, USA (Mathematical Reviews/ MathSciNet Reviewer Number: 105900). He has published a number of research papers in internationally reputed mathematical journals. He is an active a member of the editorial boards of (i) *Transnational Journal of Mathematical Analysis and Application* and (ii) *Annals of Fuzzy Mathematics and Informatics* (iii) *Financial Forum* (Singapore). Also, Editor-in-chief of the journal *Annals of Communication in Mathematics* (http://www.technoskypub.com/journal/acm/).

Dr. Muhiuddin has visited several universities / institutions worldwide. He has attended more than 20 conferences and also delivered invited talks at various universities and institutions across the globe. He has visited Paris, France and Zurich, Switzerland to present research papers at international conferences on Mathematics in 2012. He has delivered an invited talk in "The 32th Ohio State – Dension Mathematics Conference-2014", The Ohio State University, Columbus, USA in 2014.

Also, has delivered an invited research seminar talk at the Department of Mathematics, The Ohio State University, Lima, USA in 2014. He has been served as a Coordinator of two international conferences namely (i) "International Seminar on Algebra (ISA-2013)" during December16-17, 2013 (ii) "International Workshop on Pure and Applied Mathematics-2015 (IWPAM-2015)" during May 31-June 2, 2015 held at the Department of Mathematics, University of Tabuk, Tabuk, Saudi Arabia.

List of Publications in Neutrosophics

G. Muhiuddin, S. J. Kim and Y. B. Jun, Implicative N-ideals of BCK-algebras based on neutrosophic N-structures, Discrete Mathematics, *Algorithms and Applications*, Vol. 11, No. 01, 1950011 (2019).

G. Muhiuddin, H. Bordbar, F. Smarandache, Y. B. Jun, Further results on ($\in$, $\in$)-neutrosophic subalgebras and ideals in BCK/BCI-algebras, *Neutrosophic Sets and Systems*, Vol. 20, 36-43 (2018).

Nada Adel Nabeeh

Teaching Assistance

Affiliation
Information Systems Department
Faculty of Computer and Information Sciences
Mansoura University / EGYPT

Profile

B.S. from Mansoura University (Excellent with honor the first) in 2011, and Master degree received from Mansoura University in 2015. More than eight years of teaching and research experiences. The current working is as teaching assistance at Faculty of Computer and Information Sciences Mansoura University Egypt.

Research Interests

Neutrosophic sets; decision support systems; multi-criteria decision making; Cloud Computing; Big data; Smart city; Internet of Things; neural networks, Artificial Intelligence; Web Service Composition; Evolutionary Algorithms.

List of Publications in Neutrosophics

Nabeeh, N. A., Smarandache, F., Abdel-Basset, M., El-Ghareeb, H. A., & Aboelfetouh, A. (2019). An Integrated Neutrosophic-TOPSIS Approach and its Application to Personnel Selection: A New Trend in Brain Processing and Analysis. IEEE Access, 7, 29734-29744. doi: 10.1109/ACCESS.2019.2899841.

Nabeeh, N. A., Abdel-Basset, M., El-Ghareeb, H. A., & Aboelfetouh, A. (2019). Neutrosophic Multi-Criteria Decision Making Approach for IoT-Based Enterprises. IEEE Access, 7, 59559-59574. doi: 10.1109/ACCESS.2019.2908919.

Ahmed Basim Al-Nafee

Affiliation
College of Education For Pure Sciences
Math Dept., Babylon University
Babylon / IRAQ

Profile

Born in 1987, Babylon, Iraq. BA from College of Education for Pure Sciences, Department of Mathematics, Babylon University (2008). MSc from the same university,with the thesis "Separation Axioms with respect Ideal Topological Space" (2013).

Research Interests

Soft Sets; Gem-set ; Neutrosophic Sets.

List of Publications in Neutrosophics

A. B. Al-Nafee, .Riad K. Al-Hamido, F. Smarandache. Separation Axioms in Neutrosophic Crisp Topological Spaces, *Neutrosophic Sets and Systems*, Vol. (25), (2019), 25-32

Dr.

D. Nagarajan

Professor

Affiliation
Hindustan Institute of Technology and Science
Chennai - 603103 / INDIA

Profile

BSc from Manonmaniyam Sundaranar University, India in 1995. MSc degree from Manonmaniyam Sundaranar University, in 1997. Earned PhD in 2007 from Manonmaniyam Sundaranar University. Referee for some respectful journals. Published more than 50 research papers in high quality journals.

Research Interests

Single Valued Neutrosophic Sets; Interval valued Neutrosophic Sets; Neutrosophic stochastic.

List of Publications in Neutrosophics

D. Nagarajan, M. Lathamaheswari, Said Broumi J. Kavikumar (2019) A New Perspective on Traffic Control Management Using Triangular Interval Type-2 Fuzzy Sets and Interval Neutrosophic Sets. *Operations Research Perspectives*. https://doi.org/10.1016/j.orp.2019.100099

D. Nagarajan, M. Lathamaheswari, Said Broumi J. Kavikumar (2019) Dombi interval valued netrosophic graphs and its role in trafic control management, *Netrosophic sets and system* 24, 114-133.

D. Nagarajan, M. Lathamaheswari, Said Broumi J. Kavikumar (2019) Blockchain Single and Interval Valued Neutrosophic graph, *Netrosophic sets and system* 24, 23-35.

Said Broumi, Assia Bakali, Mohamed Talea, Florentin Smarandache, D. Nagarajan, M. Lathamaheswari, Parimala (2019) Shortest Path Problem with Fuzzy, Intuitionistic Fuzzy and Neutrosophic Environment: An Overview. *Complex & Intelligent Systems*, https://doi.org/10.1007/s40747-019-0098-z

Said Broumi, D. Nagarajan, Assia Bakali, Mohamed Talea, Florentin Smarandache, M. Lathamaheswari (2019) The Shortest Path Problem In Interval Valued Trapezoidal and Triangular Neutrosophic Environment. *Complex & Intelligent Systems*, https://doi.org/10.1007/s40747-019-0092-5

Said Broumi, Arindam Dey, Mohamed Talea, Assia Bakali, Florentin Smarandache, Deivanayagampillai Nagarajan, Malayalan Lathamaheswari, Ranjan Kumar (2019) Shortest path problem using Bellman algorithm under neutrosophic environment. *Complex & Intelligent Systems*. https://doi.org/10.1007/s40747-019-0101-8

D. Nagarajan, T. Tamizhi, M. Lathamaheswari, and J. Kavikumar (2019) Traffic control management using Gauss Jordan method under neutrosophic Environment. AIP Conference Proceedings 2112, 020060 (2019).

Basanti Pal Nandi

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Computer Science and Engineering Department
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Profile

Bachelor of Engineering in Power Plant Engineering from Jadavpur University in 1999. M.Tech in Computer Technology from Jadavpur University in 2005. NET qualified in 2014 organised by UGC. Currently working as an Assistant Professor at Guru Tegh Bahadur Institute of Technology. 10 years of teaching experience in academic field.

Research Interests

Neutrosophic and Fuzzy sets and its variations with applications, Natural Language Processing, Evolutionary Algorithm, Image Processing.

List of Publications in Neutrosophics

Chapter

Amita Jain, Basanti Pal Nandi, "Intuitionistic and Neutrosophic Fuzzy Logic: Basic Concepts and Applications", Hybrid Intelligent Systems in Control, Pattern Recognition and Medicine, Springer Verlag(2019).

Conferences

Amita Jain, Basanti Pal Nandi, Charu Gupta, Devendra Kumar Tayal, "A Hybrid Framework based on PSOand Neutrosophic Set for Document level Sentiment Analysis", 2nd International Conference on Information Technology and Applied Mathematics (ICITAM, March 2019).

Nanthini T.

Research Scholar

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Government Arts College
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Tamilnadu / INDIA

Profile

Bachelor of Science in Mathematics from GTN Arts College, Madurai Kamaraj University, Tamilnadu, India (2007). Master of Science in Mathematics from Gandhigram Rural University, Tamilnadu, India (2010). M. Phil in Mathematics from Bharathidasan University, Trichy, Tamilnadu, India(2013). Six years of teaching ex perience. Now, pursuing PhD in Mathematics (Topology), Government Arts College, Udumalpet, Tamilnadu, India.

Research Interests

Topology, Neutrosophic Topology.

List of Publications in Neutrosophics

A. Pushpalatha and T.Nanthini, Generalized Closed sets via neutrosophic topological spaces, *Malaya Journal of Mathematik*, Vol. 7, No. 1, 50-54, 2019.

Mahammad Hanif Page

Assistant Professor

Affiliation
Department of Mathematics
KLE Technological University
BVB Campus, Vidyanagar, Hubballi-31
Karnataka State / INDIA

Profile

Earned Ph.D. in Mathematics from Karnatak University, Dharwad in 2009. Presently working as an Assistant Professor KLE Technological University. Total 14 years of teaching experience. Published 42 papers in International journals.

Research Interests

General Topology, Fuzzy Topology, Soft Sets and Neutrosophic Topology.

List of Publications in Neutrosophics

R. Dhavaseelan, S. Jafari, R. Narmada Devi and Md. Hanif PAGE, Neutrosophic Baire Spaces, *Neutrosophics Sets and Systems*, (ISSN 2331-608X),Vol. 16 (2017), PP 20-23.

R. Dhavaseelan, S. Jafari and Md. Hanif PAGE, Neutrosophic Generalized Alpha-contra-continuity, *Creat. Math. Inform.*, 27 (2018), No. 2, 133 - 139

Dr.

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Associate Professor

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Profile

Dragan Pamucar is an Associate Professor at University of Defence in Belgrade, Military academy, Department of Logistics, Serbia. Prof. Pamucar received a PhD in Applied Mathematics with specialization of Multi-criteria modelling and soft computing techniques, from University of Defence in Belgrade, Serbia in 2013 and an MSc degree from the Faculty of Transport and Traffic Engineering in Belgrade, 2009. His research interest are in the field of Computational intelligence, multi-criteria decision making problems, neuro-fuzzy systems, fuzzy, rough and intuitionistic fuzzy set theory, neutrosophic theory. Application areas include wide range of logistics and transportation problems.

Prof. Pamucar has published more than 100 articles on international journals including *Experts Systems with Applications, Computational Intelligence, Applied Soft Computing, Journal of Cleaner Production, Sustainability, Symmetry, Water, Asia-Pacific Journal of Operational Research, Operational Research, Journal of Intelligent and Fuzzy Systems, Land use policy, Environmental Impact Assessment Review, Renewable Energy* and so on. He served as the Guest Editor of *Journal of Intelligent and Fuzzy Systems, Symmetry* and *Algorithms*. Prof. Pamucar is currently serving as the associate editor, editorial board member, or peer reviewer of several international journals. He has also acted as the chairs, board members of program committees or organizing committees in various conferences or academic organizations at home and abroad.

Neutrosophic Research

Applications of neutrosophic sets in multi-criteria decision making modelling.

List of Publications in Neutrosophics

Pamučar, D., Badi, I., Korica, S., Obradović, R. (2018). A novel approach for the selection of power generation technology using an linguistic neutrosophic combinative distance-based assessment (CODAS) method: A case study in Libya. *Energies*, 11(9), 2489, pp. 1-25. https://10. doi.org/10.3390/en11092489.

Pamučar, D., Lukovac, V., Vukić, M. (2018). Multicriteria model for the selection of the transport service provider single valued neutrosophic number based approach. International conference Transport for Todays Society (TTS 2018), 17-19. May, Bitola, Macedonia, Organized by the Faculty of Technical Sciences Bitola, pp 419-428, May 17-19. 2016. godine, Bitola, Macedonia. ISBN 978-9989-786-77-8; COBISS.MK-ID 107591178. DOI 10.20544/TTS2018.P43, UDK 656:005.53]:519.86.

Pamučar, D., Sremac, S., Stević, Ž., Ćirović, G., Tomić, D. (2019). New multi-criteria LNN WASPAS model for evaluating the work of advisors in the transport of hazardous goods. Neural Computing and Applications, 184, pp 101-129. https://10.1007/s00521-018-03997-7.

Dr.

S. Krishna Prabha

Assistant Professor

Affiliation
Department of Mathematics
PSNA College of Engineering and Technology
Dindigul / INDIA

Profile

BSc in Mathematics, GTN Arts College, Madurai Kamaraj University of Tamil Nadu in 2000. MSc in Mathematics in 2002, Madurai Kamaraj University, MPhil in Mathematics in 2004, Madurai Kamaraj University. ME-System Engineering and Operation Research Anna University, Trichy in 2012, Qualified SLET, Ph.D Scholar Mother Teresa Women's University, Kodaikanal. Assistant Professor in Department of Mathematics since 2003 to till date.

Research Interests

Fuzzy Algebra; Operations Research; Mathematical Modelling; Neutrosophic Optimization Theory and Inventory Models.

List of Publications in Neutrosophics

S. Krishna Prabha and S. Vimala, "Neutrosophic Assignment Problem via BnB Algorithm", Advances in Algebra and Analysis, Springer Nature Switzerland AG 2018

Dr.

T. Srinivasa Rao

Associate Professor

Affiliation
Department of Mathematics, K L E F
Vaddeswaram
Andhra Pradesh / INDIA

Profile

Ph.D in Mathematics from Acharya Nagarjuna University, 2014. Working as Assoc. Prof. in the dept. of Mathematics, K L E F. Guiding two Ph.D scholars. Published 22 articles and 1 book.

Research Interests

Semigroups, Γ-soft sets, Γ-Neutrosophic soft sets.

List of Publications in Neutrosophics

T. Srinivasa Rao, B. Srinivasa Kumar, S Hanumantha Rao, A Study On Γ-Neutrosophic Soft Set In Decision Making Problem, ARPN *Journal of Engineering and Applied Sciences*, Vol. 13, No. 7, 2018.

Dr.

Muhammad Riaz

Assistant Professor

Affiliation
Department of Mathematics
University of the Punjab
Lahore / PAKISTAN

Profile

Working as Assistant Professor at Department of Mathematics, University of the Punjab Lahore. He has received M.Sc. M.Phil and Ph.D degrees in Mathematics from Department of Mathematics University of the Punjab Lahore. He did his Ph.D under the supervision of Dr. Muhammad Aslam Malik Associate Professor. Department of Mathematics, University of the Punjab, Lahore (Thesis entitled "Certain Quadratic Fields under the Action of two Generator Groups"). He has also served as Lecturer in Mathematics at Govt. College of Science Lahore. His research interests include Algebra, Group Action, Functional Analysis, and Fuzzy Soft Set Theory. He has published more than 20 research papers in international and national HEC recognized journals. He is supervising M.Phil/Ph.D. scholars. He has participated and presented his research papers as invited speaker in many International and National conferences in his field of Fuzzy Sets, Soft Sets, Neutrosophic Sets and Rough Sets. He has been acting as a referee of some well reputed journals. He has 22 years regular teaching experience at Graduate and Post Graduate level in Mathematics in various HEC recognized/highly reputed public sector institutions. He is also working as the students' advisor and Coordinator 4 Years BS Program at Department of Mathematics, University of the Punjab.

Research Interests

Fuzzy Sets, Soft Sets, Neutrosophic Sets, Rough Sets, Aggregation operators, Decision-Making, Topology, Algebra.

M. Riaz, M. R. Hashmi, Fixed Points of Fuzzy Neutrosophic Soft Mapping with decision-making, *Fixed point theory and applications* 7(2018), 1-10.doi.org/10.1186/s13663-018-0632-5.

Saeed, M. Saqlain and M. Riaz, Application of Generalized Fuzzy TOPSIS in Decision Making for Neutrosophic Soft Set to Predict the Champion of FIFA 2018: A Mathematical Analysis, 51(8)(2019), 141-156.

A. Fahmi, M. Aslam and M. Riaz, New approach of triangular neutrosophic cubic linguistic hesitant fuzzy aggregation operators, *Granular Computing* (2019), doi.org/10.1007/s41066-019-00177-3.

M. Riaz, K. Naeem, I. Zareef and Deeba Afzal, Neutrosophic N-Soft Sets with TOPSIS method for Multiple Attribute Decision Making (Submitted) (2019).

M. Riaz, M. R. Hashmi, F. Smarandache, m-polar Neutrosophic Topology and its Application to Medical Diagnosis under m-polarity and Neutrosphy (Submitted) (2019).

M. Riaz and S. T. Tehrim, A Novel Extension of TOPSIS to MCGDM with Bipolar Neutrosophic Soft Topology (Submitted) (2019).

K. Naeem, M. Riaz, F. Smarandache and Deeba Afzal, Fuzzy Neutrosophic Soft σ-Algebra and Fuzzy Neutrosophic Soft σ-Measure with Applications (Submitted) (2019).

Dr.

Abhijit Saha

Assistant Professor

Affiliation
Dept. of Basic Science and Humanities
Techno College of Engg. Agartala
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Tripura (West) / INDIA

Profile

Dr. Abhijit Saha obtained M.Sc degree from Tripura University and completed Ph. D under the guidance of Prof. Anjan Mukherjee, Dept. of Mathematics of Tripura University. He has cleared SET and GATE Exam in mathematical sciences. He is currently working as an Asst. Professor and H.O.D in the Dept. of Basic Science and Humanities of Techno College of Engg. Agartala. He has more than eight years of teaching experience. Dr. Saha has published more than 15 research articles in various journals of National and International repute. His upcoming books are *Gate Engg. Mathematics*, *Graph Theory And Combinatorics*, *An Introduction To Basic Number Theory, Diploma Engg. Mathematics, 2000 Solved Problems For Cbse Class XII Mathematics, A Rudiment Of Integrals Transform*.

Research Interests

Fuzzy set theory, intuitionistic fuzzy set theory, soft set theory, rough set theory and neutrosophic set theory.

List of Publications in Neutrosophics

Interval valued neutrosophic soft sets; Anjan Mukherjee, Mithun Datta and Abhijit Saha; *Journal of Fuzzy Mathematics*; 23(2), 2015.

New operations on interval valued neutrosophic sets; Abhijit Saha and Said Broumi (Communicated)

Andrew Schumann

Affiliation
University of Information Technology and Management
Rzeszow / POLAND

Profile

Andrew Schumann works at the University of Information Technology and Management in Rzeszow, Poland. His research focuses on logic and philosophy of science with an emphasis on non-well-founded phenomena: self-references and circularity. He contributed mainly to research areas such as reasoning under uncertainty, probability reasoning, non-Archimedean mathematics, neutrosophic logics, as well as their applications to cognitive science.

Research Interests

Neutrosophics; non-Archimedean mathematics; unconventional computing; decision theory; logical modelling of economics.

List of Publications in Neutrosophics

Andrew Schumann, Florentin Smarandache, Neutrality and Many-Valued Logics. New Mexico: American Research Press, 2007, 121 pp.

Andrew Schumann, Neutrosophic logics on Non-Archimedean Structures. *Critical Review*, Creighton University, USA, Vol. III, 2009, pp. 36-58.

Serhat Aydin

Lecturer

Affiliation
National Defense University
Air Force Academy
Industrial Engineering Department
Istanbul / TURKEY

Profile

Lecturer Industrial engineering Department at National Defense University Air Force Academy, Istanbul, TURKEY. Published more than 15 papers in refereed International Journals and conference proceedings.

Research Interests

Multi Criteria Decision Making, Fuzzy Logic, Neutrosophic sets, Investment Analysis.

List of Publications in Neutrosophics

S. Aydin, M. Kabak, A. Aktaş, (2019). Neutrosophic Fuzzy Analytic Hierarchy Process Approach for Safe Cities Evaluation Criteria, Springer Nature Switzerland 2019: ICAFS-2018 AISC 896, pp 958-965, 2019 , DOI: 10.1007/978-3-030-04164-9_127

S. Aydın, C. Kahraman, M. Kabak, (2018). Evaluation of investment alternatives using present value analysis with simplified neutrosophic sets, Engineering Economics 29 (2018), 254-263.
DOI: http://dx.doi.org/10.5755/j01.ee.29.3.19392

S. Aydın, (2018). Augmented reality goggles selection by using neutrosophic MULTIMOORA method, *Journal of Enterprise Information Management*, Vol. 31 Issue: 4, pp.565-576, https://doi.org/10.1108/JEIM-01-2018-0023

S. Aydın, M.Yörükoğlu, (2018). Ground handling services firm evaluation based on neutrosophic MULTIMOORA method, Conference on Data Science and Knowledge Engineering for Sensing Decision Support (FLINS 2018)

M. Yörükoğlu, S. Aydın, (2019). Evaluation of space debris mitigation measures by Neutrosophic MULTIMOORA Method, RAST2019 *Recent Advances in Space Technologies*, Istanbul

Shahzaib Ashraf

PhD Candidate

Affiliation
Department of Mathematics
Abdul Wali Khan University
Mardan 23200 / PAKISTAN

Profile

Received MS degree in Mathematics from International Islamic University, Islamabad, Pakistan. Currently he is a PhD scholar at Department of Mathematics, Abdul Wali Khan University, Mardan, Pakistan. Also served the Abdul Wali Khan University as visiting Lecturer. Published 15 research articles in international peer-reviewed journals, including 10 ISI Indexed / IF Journal publications. Some papers have been published in high impact journals including *International Journal of Intelligent Systems, Journal of Intelligent and Fuzzy Systems and Symmetry*.

Research Interests

Applications of fuzzy systems and related topics, logical algebras; Fuzzy aggregation operators, Fuzzy decision support / decision-making systems.

List of Publications in Neutrosophics

Ashraf, S., Abdullah, S., & Smarandache, F. (2019). Logarithmic Hybrid Aggregation Operators Based on Single Valued Neutrosophic Sets and Their Applications in Decision Support Systems. *Symmetry*, 11(3), 364.

Saranya Shanmugam

PhD Research Scholar

Affiliation
PG and Research Department of Mathematics
Kongunadu Arts and Science College
Coimbatore-641 029 / INDIA

Profile

Born July 1990, Karur, India. In 2010, Received Bachelor of Science degree in Mathematics from Kongunadu Arts and Science College which is affiliated to Bharathiar University, Coimbatore, India. In 2011, Received Bachelor of Education degree from Tamilnadu Teachers Education University, Chennai, India. In 2013, Received Master of Science degree in Mathematics from Kongunadu Arts and Science College, Coimbatore, India. In 2015, Received Master of Philosophy Degree with "Highly Commended" from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, India. From 2015-17, Worked as an Assistant Professor of Mathematics in M.Kumarasamy College of Engineering, Karur, India. Currently Pursuing Ph.D in Topology (Mathematics) at Kongunadu Arts and Science College, Coimbatore, India. Published more than Six research articles in reputed national and international journals, out of which Three articles are Scopus indexed / WEB of Science.

Research Interests

General Topology, Neutrosophic Topology.

List of Publications in Neutrosophics

> S. Saranya, M. Vigneshwaran. Neutrosophic b*gα-Interior and Neutrosophic b*gα-Closure, *American International Journal of Research in Science, Technology, Engineering and*

Mathematics, Special Issue, (2019), pp. 145-149. (UGC Approved)

S. Saranya, M. Vigneshwaran. Neutrosophic b*gα-Closed Sets, *Neutrosophic Sets and Systems*, 24(2019), pp. 90-99. (WEB OF SCIENCE & SCOPUS)

S. Saranya, M. Vigneshwaran. C# Application to Deal with Neutrosophic α-Closed Sets, *Journal of Advanced Research in Dynamical and Control Systems*, 11(2019), 01-Special Issue, pp. 1347-1355. (SCOPUS)

S. Saranya, M.Vigneshwaran. Design and Development of .NET Framework to Deal with Neutrosophic *gα Sets", *International Journal of Engineering and Advanced Technology* (IJEAT), 8(2019), Issue 3S-February, pp. 852-857. (SCOPUS)

Conferences

S. Saranya and M. Vigneshwaran, "Neutrosophic b*gα-Interior and Neutrosophic b*gα-Closure", 2nd International Conference on Current Scenario in Pure and Applied Mathematics, PG and Research Department of Mathematics, Kongunadu Arts and Science College, Coimbatore on 03 January, 2019.

S. Saranya and M. Vigneshwaran, "Properties of Neutrosophic b*gα-Interior and Neutrosophic b*gα-Closure", National Conference on Recent Developments in Mathematics, PG and Research Department of Mathematics, Government Arts College, Coimbatore on 21-22 February, 2019.

S. Saranya and M. Vigneshwaran, ".Net Framework to Deal with Neutrosophic α-Sets", International Conference on Recent Advances in Pure and Applied Mathematics, Department of Mathematics, Arul Anandar College, Madurai on 14 February, 2019.

Dr.

Lilian Shi

Professor

Affiliation
Department of Electrical and Information Engineering
Shaoxing University 508 Huancheng West Road
Shaoxing Zhejiang Province 312000 / P.R. CHINA

Profile

Master degree from Nanjing University of Science and Technology, in1994. Doctoral degree in technical sciences (PhD) from ZhejiangUniversity, in 2004. Between September 2015-December 2015, visiting scholar in Curtin University, Australia. Currently, professor in the Department of Electrical and Information Engineering, Shaoxing University, P.R. China. Published more than 20 papers in journals, and finished a few projects sponsored by the government of P.R. China.

Research Interests

Neutrosophic theory and applications; pattern recognitions; fault diagnosis.

List of Publications in Neutrosophics

Lilian Shi. Correlation coefficient of simplified neutrosophic sets for bearing fault diagnosis. *Shock and Vibration*. 2016. DOI: 10.1155/2016/5414361

Lilian Shi, Jun Ye. Cosine measures of linguistic neutrosophic numbers and their application in multiple attribute group decision-making. *Information* 2017. DOI: 10.3390/info8040117

Lilian Shi, Jun Ye. Dombi aggregation operators of neutrosophic cubic sets formultiple attribute decision-making, *Algorithms* 2018. DOI: 10.3390/a11030029

Lilian Shi, Jun Ye. Multiple attribute group decision-making method using correlation coefficients between linguistic neutrosophic numbers. *Journal of Intelligent & Fuzzy Systems*, 2018. DOI:10.3233/JIFS-171652

Lilian Shi ,Yue Yuan. Hybrid weighted arithmetic and geometric aggregation operator of neutrosophic cubic sets for MADM. *Symmetry* 2019. DOI:10.3390/sym11020278

Dr.

Mohammed Al-Shumrani

Associate Professor

Affiliation
Department of Mathematics, Faculty of Sciences
King Abdulaziz University, P.O. Box 80203
Jeddah 21589 / SAUDI ARABIA

Profile

B.Sc. (1998) King Abdulaziz University, Jeddah, Saudi Arabia. M.Sc. (2002) University of Missouri-Kansas City, Missouri, U.S.A. Ph.D. (2006) University of Glasgow, Glasgow, U.K. Member of the editorial board in the journal "Neutrosophic Sets and Systems", 2019. Member of Advisory Committee, Department of Mathematics, 2016-now. Chairman of Topology section and chairman of Differential Geometry section, Department of Mathematics, 2016-now. Coordinator of Math 251, 2018 and 2019. Vice dean, Jeddah Community College (KAU), 2013-2015. Chairman of GRC Department, Jeddah Community College (KAU), 2010-2013. Coordinator of Math 111, 2011. Head of academic accreditation, ELI (KAU), 2010. Coordinator of seminars, Department of Mathematics, 2009-2010. Academic advisor for graduate studies, Department of Mathematics, 2009-2010. Chairman of social activity committee, Faculty of Sciences, 2009. Chairman of Islamic awareness committee, Faculty of Sciences, 2008.

Research Interests

General Topology, Algebraic Topology, Neutrosophic Theory, Category Theory.

List of Publications in Neutrosophics

Mohammed Al Shumrani, Florentin Smarandache. Introduction to Non-Standard Neutrosophic Topology. *Symmetry*. 2019, 11, 706. Doi:10.3390/sym/11050706

Dr.
Željko Stević
Assistant Professor

Affiliation
Faculty of Transport and Traffic Engineering Doboj
University of East Sarajevo / BOSNIA and HERZEGOVINA

Profile

Assistant professor at Faculty of Transport and Traffic Engineering Doboj, University of East Sarajevo. He received PhD in Transport and Traffic Engineering from University of Novi Sad, Faculty of Technical Sciences 2018. Interests: logistics; supply chain management; transport; traffic engineering; multi-criteria decision making problems; rough set theory; sustainability; fuzzy set theory, neutrosophic set theory. He has published over 90 papers from the area of his interest. He has contributed outstanding research in the mentioned fields. In all his researches he has provided a very good application studies and practical contributed solving different problems in transportation, logistics, supply chain management, traffic engineering etc. In his doctoral dissertation he developed few MCDM models including one universal model for supplier selection in different fields. His published studies are very well cited in other research that can be seen in ResearchGate and Google Scholar.

Authored/co-authored of papers published in refereed International Journals including *Applied Soft Computing, Neural Computing and Applications, Sustainability, Symmetry, Engineering Economics, Transport, Scientometric, Information, ECECSR, Technical gazette, SIC*, and other. Awards: Jan 2018 Award: Medal merit for the people in the field of education and science. Nov 2017 Award: The best young researcher of the 3rd cycle (Doctoral) studies-(Festival of Science 2017).

Pamučar, D., Sremac, S., Stević, Ž., Ćirović, G., & Tomić, D. New multi-criteria LNN WASPAS model for evaluating the work of advisors in the transport of hazardous goods. *Neural Computing and Applications*, 1-24.

Salah Hasan Saleh Al-Subhi

PhD student

Affiliation
Universidad de Ciencias Informáticas (UCI)
Havana / CUBA

Profile

PhD student in Technical Sciences (Specialty Artificial Intelligence, Master of Science (Specialty in Telematics) and Informatics Engineer. Editor of *Neutrosophic Set and Systems* Journal (*fs.unm.edu/NSS*). Editors-in-Chief of *Neutrosophic Coputing and Machine Learning* Journal (*fs.unm.edu/NCML*).

Research Interests

Artificial Intelligence; Data Science, Machine Learning, Neutrosophic Cognitive Maps, Recommender Systems, Multicriteria Decision Support.

Neutrosophic Research

Neutrosophics Computation, Neutrosophic Multicriteria Decision Support, Neutrosophic Cognitive Maps.

List of Publications in Neutrosophics

> Salah Hasan Saleh Al-Subhi, Iliana Perez Pupo, Roberto Garcia Vacacela, Pedro Y. Pinero Perez, Maikel Y Leyva Vazquez: A New Neutrosophic Cognitive Map with Neutrosophic Sets on Connections, Application in Project Management, *Neutrosophic Sets and Systems*, vol. 22, 2018.

International congress

> "Neutrosophic Cognitive Map for a Multi-Objective Decision Making in Software Projects" in the 22nd Iberoamerican Conference on Software Engineering, Abril 2019.

Dr.

R. Suresh

Assistant Professor

Affiliation
Vivekanandha Nagar, Trichy-620 011
Tamilnadu / INDIA

Profile

Received Endowment prize in M.Sc. First Year and Final Year. Received cash Award for produced 100% results. Received certificate of appreciation for produced good results. Acted as Chief Superintendent and Squad and Chief AUR of Anna university examination in Jan.'2018 examination. Additional coordinator of examination in Kings College of Engineering, Pudukottai. Active member of proposed and organized DST-Sponsored Mathematics popularization and communication during November 2015.

List of Publications in Neutrosophics

P. Thirunavukarasu, R. Suresh: *On Regular Complex Neutrosophic Graphs*.

Dr.

Madeleine Al-Tahan

Assistant Professor

Affiliation
Department of Mathematics and Physics
Faculty of Arts and Science
Lebanese International University
Khyara-West Bekaa / LEBANON

Profile

PhD in Pure Mathematics (Highly distinguished), Faculty of Science, Beirut Arab University (BAU), 2009 – 2013, under the supervision of Professor Dr. Mohammad Abdulrahim (BAU) and Professor Dr. Samer Habre (LAU). Thesis title: *Group Representations of High Degree*. Masters in Pure Mathematics (Highly distinguished) from the Faculty of Science, Beirut Arab University (BAU), 2007 – 2009, under the supervision of Professor Dr. Mohammad Abdulrahim. Thesis title: *Krammer's representations of the braid and pure braid groups*. Research topic: *nth group of units*. BSc. in Pure Mathematics (Highly distinguished), 2004 –2007. Senior project title: *Third group of units*.

Research Interests

Hyperstructures, Fuzzy sets, Representation theory.

List of Publications in Neutrosophics

M. Al- Tahan, B. Davvaz. On Neutrosophic quadruple Hv-groups and their properties. Southeast *Asian Bulletin of Mathematics* (accepted).

M. Al-Tahan, B. Davvaz. Fundamental group and complete parts of Neutrosophic Quadruple Hv-groups

M. Al-Tahan, B. Davvaz. On some properties of Neutrosophic Quadruple Hv-rings

M. Al-Tahan, B. Davvaz. Neutrosophic Quadruple Hv-modules and their fundamental module

M. Al-Tahan, B. Davvaz. Refined neutrosophic quadruple (po-)hypergroups and their fundamental group

Mohammad Mohseni Takallo

PhD Student

Affiliation
Department of Mathematics
Shahid Beheshti University
Tehran 7561 / IRAN

Profile

PHD Student Fellow (Supervised by Prof. Rajab Ali Borzooei & Prof. Young Bae Jun) at Shahid Beheshti University, Tehran, Iran. MSc from Shahid Beheshti University in Soft Computing, with the thesis: " The Zero Divisor Graph of Lattice"(2017).

Research Interests

Fuzzy, soft and rough set theory in algebraic structures; Graph and Fuzzy graph Theory; Neutrosophic logic; Neutrosophic algebraic structure; Operation Research; Data Envelopment Analysis.

List of Publications in Neutrosophics

M. Mohseni Takallo, R.A. Borzooei and Y.B. Jun, MBJ-neutrosophic structures and its applications in BCK/BCI-algebras, *Neutrosophic Sets and Systems*, 23 (2018), 72—84.

R.A. Borzooei, M. Mohseni Takallo, F. Smarandache and Y.B. Jun, Positive implicative BMBJ-neutrosophic ideals in BCK-algebras, *Neutrosophic Sets and Systems*, 23 (2018), 148—163.

Dr.

Mohamed Talea

Professor of Computer Science

Affiliation
Laboratory of Information Processing
Faculty of Science Ben M'Sik, University Hassan II
B.P 7955, Sidi Othman, Casablanca
Bd Driss ELHARTI BP 7955
Casablanca / MOROCCO

Profile

Received his Ph.D. degree in physics from Poitiers University, France, in 2001, he obtained a Doctorate of High Graduate Studies degree from the Hassan II University, Morocco, in 1994. Currently, he is a Professor in the department of physics at Hassan II University, Morocco, and he is the Director of Information Treatment Laboratory. He has published about 200 refereed journal and conference papers.

Research Interests

Systems engineering, security of system information, neutrosophic graph theory.

List of Publications in Neutrosophics

S. Broumi, A. Bakali, M. Talea, F. Smarandache, V. Uluçay, M. Sahin, A. Dey, M. Dhar, R.P. Tan, A. Bahnasse, S. Pramanik, Neutrosophic Sets: An Overview, In book: *New Trends in Neutrosophic Theory and Applications*, Volume 2, Publisher: Pons Edition, Editors: Florentin Smarandache, Surapati Pramanik, 2018, pp. 403-434

Broumi S, Bakali A, Talea M, Smarandache, Kishore Kumar P.K, Shortest Path Problem on Single Valued Neutrosophic Graphs. 2017 International Symposium on Networks, Computers and Communications (ISNCC) (2017):1- 8

S. Broumi, A. Bakali, M. Talea, F. Smarandache, L. Vladareanu, Computation of Shortest Path Problem in a Network with

SV-Trapezoidal Neutrosophic Numbers, Proceedings of the 2016 International Conference on Advanced Mechatronic Systems, Melbourne, Australia, 2016 , pp.417-422.

S. Broumi, A. Bakali, M. Talea, F. Smarandache, L. Vladareanu, Applying Dijkstra Algorithm for Solving Neutrosophic Shortest Path Problem, Proceedings of the 2016 International Conference on Advanced Mechatronic Systems, Melbourne, Australia, 2016 , pp.412-416.

S. Broumi, A. Bakali, M. Talea, F. Smarandache, Shortest Path Problem under Trapezoidal Neutrosophic Information, Computing Conference 2017, 18-20 July 2017, pp142-148.

S. Broumi, A. Bakali, T. Mohamed, F. Smarandache and L. Vladareanu, Shortest Path Problem Under Triangular Fuzzy Neutrosophic Information, 10th International Conference on Software, Knowledge, Information Management & Applications (SKIMA),2016,pp.169-174.

S. Broumi, A. Bakali, M. Talea, F. Smarandache and M. Ali, Shortest Path Problem under Bipolar Neutrosphic Setting, *Applied Mechanics and Materials*, Vol. 859, 2016, pp. 59-66.

S. Broumi, A. Bakali, M.Talea, F. Smarandache, K. P. Krishnan Kishore, R.Şahin, Shortest Path Problem Under Interval Valued Neutrosophic Setting, *Journal of Fundamental and Applied Sciences*, 2018, 10(4S), pp.168-174

Said Broumi; Mohamed Talea; Assia Bakali; Florentin Smarandache, Application of Dijkstra algorithm for solving interval valued neutrosophic shortest path problem, 2016 IEEE Symposium Series on Computational Intelligence (SSCI),pp1 – 6

Broumi, S., et al., Spanning Tree Problem with Neutrosophic Edge Weights. 2018: Infinite Study.

Said Broumi, Assia Bakali, Mohamed Talea, Florentin Smarandache, Vakkas Uluçay, Minimum Spanning Tree in Trapezoidal Fuzzy Neutrosophic Environment. IBICA 2017: 25-35

Broumi S., Talea M., Bakali A., Smarandache F., Patro S.K. (2019) Minimum Spanning Tree Problem with Single-Valued

Trapezoidal Neutrosophic Numbers. In: Arai K., Kapoor S., Bhatia R. (eds) Intelligent Computing. SAI 2018. *Advances in Intelligent Systems and Computing*, vol 857. Springer, Cham pp 93-105.

Broumi, Said; Talea, Mohamed; Bakali, Assia; F. Smarandache; Ullah, Kifayat, Bipolar Neutrosophic Minimum Spanning Tree , Smart Application and Data Analysis for SmartCities (SADASC'18), 2018, pp. 201-206.

Mullai, M., Broumi, S., Stephen, A.: Shortest path problem by minimal spanning tree algorithm using bipolar neutrosophic numbers. *Int. J. Math. Trends Technol*. 46(2), 80–87 (2017)

A.Dey, S. Broumi, L. H.Son, A.Bakali, M. Talea, F.Smarandache, A new algorithm for finding minimum spanning trees with undirected neutrosophic graphs, *Granular Computing*, 2018,

Broumi, S., Bakali, A., Talea, M, Smarandache, F.& Kishore Kumar, P. K. (2016c). A new concept of matrix algorithm for MST in undirected interval valued neutrosophic graph. Chapter in book *Neutrosophic Operational Research*, Volume II, FlorentinSmarandache, Mohamed Abdel-Basset and Victor Chang (Editors), 2017, pp. 54-69. ISBN 978-1-59973-537-

Said Broumi, Assia Bakali, Mohamed Talea, Florentin Smarandache, and Rajkumar Verma, Computing Minimum Spanning Tree in Interval Valued Bipolar Neutrosophic Environment, *International Journal of Modeling and Optimization*, Vol. 7, No. 5, 2017, pp300-304,

S. Broumi, M. Talea, F. Smarandache and A. Bakali, Single Valued Neutrosophic Graphs: Degree, Order and Size, IEEE International Conference on Fuzzy Systems (FUZZ), 2016

Strong Degrees in Single Valued Neutrosophic Graphs, K. Arai et al. (Eds.): FICC 2018, AISC 886, pp. 1–18, 2019.https://doi.org/10.1007/978-3-030-03402-3_16

S. Broumi, M. Talea, A. Bakali, F. Smarandache, Single Valued Neutrosophic Graphs, *Journal of New Theory*, 10, 2016, pp. 86-101.

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S. Broumi, A. Dey, A. Bakali, M. Talea, F. Smarandache, L. H. Son, D. Koley, Uniform Single Valued Neutrosophic Graphs, *Neutrosophic Sets and Systems*, Vol. 17, (2017).42-49

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Profile

Nguyen Xuan Thao was born on October 28, 1982, in Thai Binh, Viet Nam. He received the B.Sc. and M.S Degrees, in Mathematic from The College of Science Vietnamese National University (VNU), Hanoi, in 2004 and 2009, respectively. Now, he is a lecturer, Department of applied MathInformatics, Faculty of Information Technology, Vienam National University of Agriculture (VNUA), Viet Nam. He is teaching Calculus, Optimization, Fuzzy logic and its application.

Research Interests

Spectral theory of operator; Fuzzy set theory, Rough set theory, neutrosophic sets and application in data mining, pattern recognition, multi criteria decision making.

Neutrosophic Research

Innovative research in decision making and optimization in uncertain environment: fuzzy, intuitionistic and neutrosophic environment.

List of Publications in Neutrosophics

Le Thi Nhung, Nguyen Xuan Thao, A Novel Multi-Criteria Decision Making Method for Evaluating Water Reuse Applications Under Uncertainty, *Vietnam Journal of Agricultural Sciences* (2019), Vol 1(3), pp 230-239.

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BS in Mathematics (2010-2014), International Islamic University Islamabad. MS in Mathematics (2014-2016), International Islamic University Islamabad. PhD in Mathematics (2016 to date).
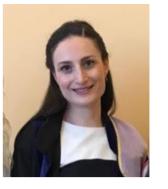
Research Interests

Generalizations of Fuzzy Sets, Fuzzy Aggregation Operators, Similarity and Distance Measures, Fuzzzy Relations, Fuzzy Graph Theory.

List of Publications in Neutrosophics

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Research Interests

Fuzzy Sets; Fuzzy Topologies; (Fuzzy) Soft Sets and (Fuzzy) Soft Topological Structures; Fuzzy Metric; Single Valued Neutrosophic Sets.

Neutrosophic Research

Apply the theory of Single Valued Neutrosophic Sets in algebraic structures such as group, ring, module, field and etc.

List of Publications in Neutrosophics

> V. Çetkin, B. P. Varol, H. Aygün, On neutrosophic submodules of a module. Hacettepe *Journal of Mathematics and Statistics*, Volume 46 (5) (2017), 791 – 799.

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Research Interests

Fuzzy sets and their applications, Fuzzy graphs and their applications in in some decision-making, Fixed points for (fuzzy) ordered structures, Aggregation operators and their applications.

List of Publications in Neutrosophics

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Profile

Received the MS degree from Shaanxi Normal University in 2007-2010, and PhD degree of Shaanxi Normal University in 2011-2014. Awarded the National scholarship for PhD students in 2013.

Research Interests

Fuzzy Sets; Rough Sets; Neutrosophic Sets; Neutrosophic Multi Criteria Making; fuzzy topology; logic algebra.

List of Publications in Neutrosophics

Zhao, H.Y. Zhang, A result on single valued neutrosophic refined rough approximation operators, *J. Intell. Fuzzy Syst.* 35 (2018), 3139-3146.

H. Zhao, H.Y. Zhang, Some Results on Multigranulation Neutrosophic Rough Sets on a Single Domain, *Symmetry*, 10 (2018), 417; https://doi.org/10.3390/sym10090417.

This is the third volume of the *Encyclopedia of Neutrosophic Researchers*, edited from materials offered by the authors who responded to the editor's invitation.

The authors are listed alphabetically.

The introduction contains a *short history of neutrosophics*, together with *links* to the main papers and books.

Neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics, neutrosophic measure, neutrosophic precalculus, neutrosophic calculus and so on are gaining significant attention in solving many real life problems that involve uncertainty, impreciseness, vagueness, incompleteness, inconsistent, and indeterminacy.

In the past years the fields of neutrosophics have been extended and applied in various fields, such as: artificial intelligence, data mining, soft computing, decision making in incomplete / indeterminate / inconsistent information systems, image processing, computational modelling, robotics, medical diagnosis, biomedical engineering, investment problems, economic forecasting, social science, humanistic and practical achievements.