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Date of Birth:
April 01, 1992

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MR. SHAHZAIB ASHRAF

EDUCATION:

ABDUL WALI KHAN UNIVERSITY, MARDAN, PAKISTAN

PhD, Mathematics (thesis submitted)

Specialization: Pure Mathematics in Fuzzy algebra

Title Synopsis: “*Analysis and Applications of Spherical Fuzzy Sets in Decision Support Systems*”.

Supervisor: Dr. Saleem Abdullah

C.G.P.A: 3.82 (Course work)

Year: 2017- continue (Expected 2020)

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD, PAKISTAN

MS Mathematics

Specialization: Pure Mathematics in Fuzzy algebra

Title Thesis: “*Some Contribution in Generalization of Fuzzy Sets*”.

Supervisor: Dr. Tahir Mahmood

C.G.P.A: 3.95

Year: 2017

UNIVERSITY OF SARGODHA, SARGODHA, PAKISTAN

BS Mathematics

Specialization: Pure Mathematics

Title Project: “*Shape Preserving C^2 Rational cubic Spline Function for Positive Data*”.

Supervisor: Dr. Muhmmad Abbas

C.G.P.A: 3.57

Year: 2015

B.I.S.E. FAISALABAD

Higher Secondary School Certificate

Majors: Mathematics, Physics, Chemistry

Percentage: 59%

Year: 2011

B.I.S.E. FAISALABAD

Secondary School Certificate

Majors: Mathematics, Physics, Chemistry, Biology

Percentage: 70%

Year: 2008

DISTINCTIONS/ HONOURS/AWARDS:

- ✚ Merit Position in MS, 3rd in the order of position in the batch.
- ✚ Received merit Scholarship in MS.
- ✚ Received PM Laptop.
- ✚ Received 3rd position Scholarship and Shield in BS.
- ✚ Received shield for best performed in CRSOM-1 2014.

PROFESSIONAL EXPERIENCE:

- ✚ Position held: Research Assistant
Organization: Abdul Wali Khan University, Mardan, Pakistan.
Duration: Sept 2019 - Continue
- ✚ Position held: Visiting Lecturer
Organization: Abdul Wali Khan University, Mardan, Pakistan.
Duration: Sept 2018 - Feb 2019 (1 semester)
Title of Courses: Algebra-1, Calculus.
- ✚ Position held: Visiting Lecturer Under Prime Minister's Youth Training Scheme
Organization: International Islamic University, Islamabad, Pakistan.
Duration: June 2016 - May 2017 (1 Year)
Title of Courses: Linear Algebra, Calculus, Complex Analysis
- ✚ Position held: Visiting Lecturer
Organization: Govt. Mian Shahbaz Sharif Degree College, Khayaban-e-Sir Syed, Rawalpindi.
Duration: 12th November 2015 -12st March 2016 (4 months)
Title of Courses: Calculus

RESEARCH INTERESTS:

- ✚ Artificial intelligence-based decision support systems
- ✚ Fuzzy decision making
- ✚ Real life problems-based decision support techniques

OBJECTIVE:

To plan and execute new projects of research in the fields of Fuzzy structures.

RESEARCH/PUBLICATIONS:

Thesis/Project:

- ✚ **Shahzaib Ashraf**, “*Some Contribution in Generalization of Fuzzy Sets*”, IIUI Thesis, (2017).
- ✚ **Shahzaib Ashraf**, “*Shape Preserving C^2 Rational cubic Spline Function for Positive Data*”, UOS Project, (2015).

Publications:

- [1] **Ashraf, S.**, Mahmood, T., Abdullah, S., & Khan, Q. (2019). Different approaches to multi-criteria group decision making problems for picture fuzzy environment. **Bulletin of the Brazilian Mathematical Society, New Series**, 50(2) :373-397.
(Impact Factor = 0.500)
- [2] **Ashraf, S.**, Abdullah, S., Mahmood, T., Ghani, F., & Mahmood, T. (2019). Spherical fuzzy sets and their applications in multi-attribute decision making problems. **Journal of Intelligent & Fuzzy Systems**, 36(3):2829–2844.
(Impact Factor = 1.637)
- [3] **Ashraf, S.**, Abdullah, S., & Qadir, A. (2018). Novel concept of cubic picture fuzzy sets. **J. New Theory**, 24, 59-72.
- [4] **Ashraf, S.**, & Abdullah, S. (2019). Spherical aggregation operators and their application in multi-attribute group decision-making. **International Journal of Intelligent Systems**, 34(3), 493-523.
(Impact Factor = 7.229)
- [5] **Ashraf, S.**, Abdullah, S., & Mahmood, T. (2018). GRA method based on spherical linguistic fuzzy Choquet integral environment and its application in multi-attribute decision-making problems. **Mathematical Sciences**, 12(4), 263-275.
(Emerging Sources)
- [6] **Ashraf, S.**, Mahmood, T., Abdullah, S., & Khan, Q. (2018). Picture Fuzzy Linguistic Sets and Their Applications for Multi-Attribute Group Decision Making. **The Nucleus**, 55(2), 66-73.
- [7] Zeng, S., **Ashraf, S.**, Arif, M., & Abdullah, S. (2019). Application of Exponential Jensen Picture Fuzzy Divergence Measure in Multi-Criteria Group Decision Making. **Mathematics**, 7(2), 191.
(Impact Factor = 1.105)
- [8] **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.
(Impact Factor = 2.143)
- [9] Khan, A. A., **Ashraf, S.**, Abdullah, S., Qiyas, M., Luo, J., & Khan, S. U. (2019). Pythagorean Fuzzy Dombi Aggregation Operators and Their Application in Decision Support

System. *Symmetry*, 11(3), 383.

(Impact Factor = 2.143)

- [10] Khan, M. J., Kumam, P., **Ashraf, S.**, & Kumam, W. (2019). Generalized Picture Fuzzy Soft Sets and Their Application in Decision Support Systems. *Symmetry*, 11(3), 415.

(Impact Factor = 2.143)

- [11] Zeng, S., Hussain, A., Mahmood, T., Irfan Ali, M., **Ashraf, S.**, & Munir, M. (2019). Covering-Based Spherical Fuzzy Rough Set Model Hybrid with TOPSIS for Multi-Attribute Decision-Making. *Symmetry*, 11(4), 547.

(Impact Factor = 2.143)

- [12] Jin, H., **Ashraf, S.**, Abdullah, S., Qiyas, M., Bano, M. and Zeng, S. (2019). Linguistic Spherical Fuzzy Aggregation Operators and Their Applications in Multi-Attribute Decision Making Problems. *Mathematics*, 7(2), 413.

(Impact Factor = 1.105)

- [13] Rafiq, M., **Ashraf, S.**, Abdullah, S., Mahmood T. and Muhammad, S., (2019). The cosine similarity measures of spherical fuzzy sets and their applications in decision making. *Journal of Intelligent & Fuzzy Systems*, 36(6): 6059-6073.

(Impact Factor = 1.637)

- [14] **Ashraf, S.**, Abdullah, S., Aslam, M., Qiyas, M. and Kutbi, M.A. (2019). Spherical fuzzy sets and its representation of spherical fuzzy t-norms and t-conorms. *Journal of Intelligent & Fuzzy Systems*, 36(6):6089-6102.

(Impact Factor = 1.637)

- [15] Qiyas, M., Abdullah, S., **Ashraf, S.**, 2019. Solution of multi-criteria group decision making problem based on picture linguistic information's. *International Journal of Algebra and Statistics*, 8, pp.1–11.

- [16] Qiyas, M., Naeem, M., **Ashraf, S.**, Khan, S., Ghani, F., 2019. An Approach for Multi-Criteria Decision-Making Problems with Unknown Weight Information Using GRA Method Under the Picture Linguistic Fuzzy Environment. *Journal of New Theory*, 28, pp.5-19.

- [17] **Ashraf, S.**, Abdullah, S. and Mahmood, T., 2020. Spherical fuzzy Dombi aggregation operators and their application in group decision making problems. *Journal of Ambient Intelligence and Humanized Computing*, 11, pp. 2731–2749.

(Impact Factor = 4.594)

- [18] Jin, Y., **Ashraf, S.** and Abdullah, S., 2019. Spherical Fuzzy Logarithmic Aggregation Operators Based on Entropy and Their Application in Decision Support Systems. **Entropy**, 21, p.628.

(Impact Factor = 2.419)

- [19] Khan, S., Abdullah, S., & **Ashraf, S.** (2019). Picture fuzzy aggregation information based on Einstein operations and their application in decision making. **Mathematical Sciences**, <https://doi.org/10.1007/s40096-019-0291-7>.

(Emerging Sources)

- [20] **Ashraf S.**, Abdullah S, Qiyas M and Khan S. (2019).Picture Fuzzy Grey Approach for Decision Problems with unknown Weight Information. **J Biostat Biometric App** 4(1): 103

- [21] Khan, S., Abdullah, S., Abdullah, L. and **Ashraf, S.**, 2019. Logarithmic Aggregation Operators of Picture Fuzzy Numbers for Multi-Attribute Decision Making Problems. **Mathematics**, 7(7), p.608.

(Impact Factor = 1.105)

- [22] **Ashraf, S.**, Abdullah, S. and Abdullah, L., 2019. Child Development Influence Environmental Factors Determined Using Spherical Fuzzy Distance Measures. **Mathematics**, 7(8), p.661.

(Impact Factor = 1.105)

- [23] Khan, M.J., Kumam, P., Liu, P., Kumam, W. and **Ashraf, S.**, 2019. A Novel Approach to Generalized Intuitionistic Fuzzy Soft Sets and Its Application in Decision Support System. **Mathematics**, 7(8), p.742.

(Impact Factor = 1.105)

- [24] Qiyas, M., Abdullah, S., **Ashraf, S.** and Abdullah, L., 2019. Linguistic Picture Fuzzy Dombi Aggregation Operators and Their Application in Multiple Attribute Group Decision Making problem. **Mathematics**, 7(8), p.764.

(Impact Factor = 1.105)

- [25] Qiyas, M., Abdullah, S., **Ashraf, S.**, Khan, S. and Khan, A., 2019. Triangular picture fuzzy linguistic induced ordered weighted aggregation operators and its application on decision making problems. **Mathematical Foundations of Computing**, 2(3), pp.183-201.

(Emerging Sources)

- [26] **Ashraf, S.**, Abdullah, S., Mahmood, T. and Aslam, M.,

2019. Cleaner Production Evaluation in Gold Mines Using Novel Distance Measure Method with Cubic Picture Fuzzy Numbers. **International Journal of Fuzzy Systems**, 21(8), pp.2448-2461.

(Impact Factor = 3.085)

[27] **Ashraf, S.**, Abdullah, S., Qiyas, M. and Khan, A., 2019. The Application of GRA Method Base on Choquet Integral Using Spherical Fuzzy Information in Decision Making Problems. **Journal of New Theory**, (28), pp.84-97.

[28] Qiyas, M., Abdullah, S., **Ashraf, S.** and Aslam, M., Utilizing Linguistic Picture Fuzzy Aggregation Operators for Multiple-Attribute Decision-Making Problems. **International Journal of Fuzzy Systems**, 22(1), pp.310–320.

(Impact Factor = 4.406)

[29] Barukab, O., Abdullah, S., **Ashraf, S.**, Arif, M. and Khan, S.A., 2019. A New Approach to Fuzzy TOPSIS Method Based on Entropy Measure under Spherical Fuzzy Information. **Entropy**, 21(12), p.1231.

(Impact Factor = 2.419)

[30] Abdullah, S. and **Ashraf, S.**, 2019. cubic picture fuzzy sets and their application to a petroleum circulation centre evaluation problem. **Sigma**, 10(2), pp.99-133.

(Emerging Sources)

[31] **Ashraf, S.**, Abdullah, S., Zeng, S., Jin, H. and Ghani, F., 2020. Fuzzy Decision Support Modeling for Hydrogen Power Plant Selection Based on Single Valued Neutrosophic Sine Trigonometric Aggregation Operators. **Symmetry**, 12(2), p.298.

(Impact Factor = 2.143)

[32] Batool, B., Ahmad, M., Abdullah, S., **Ashraf, S.** and Chinram, R., 2020. Entropy Based Pythagorean Probabilistic Hesitant Fuzzy Decision Making Technique and Its Application for Fog-Haze Factor Assessment Problem. **Entropy**, 22(3), p.318.

(Impact Factor = 2.494)

[33] **Ashraf, S.** and Abdullah, S., 2020. Some novel aggregation operators for cubic picture fuzzy information: application in multi-attribute decision support problem. **Granular Computing**, pp.1-16.

(Emerging Sources)

[34] **Ashraf, S.**, Abdullah, S. and Aslam, M., Symmetric sum

based aggregation operators for spherical fuzzy information: Application in multi-attribute group decision making problem. **Journal of Intelligent & Fuzzy Systems**, 38(4), pp.5241-5255.

(Impact Factor = 1.851)

[35] **Ashraf, S.**, Abdullah, S. and Mahmood, T., 2020. Aggregation operators of cubic picture fuzzy quantities and their application in decision support systems. **The Korean Journal of Mathematics**, 28(2), pp.343-359.

(Emerging Sources)

[36] Khan, M.A., **Ashraf, S.**, Abdullah, S. and Ghani, F., (2020) Applications of probabilistic hesitant fuzzy rough set in decision support system. **Soft Computing**. <https://doi.org/10.1007/s00500-020-04971-z>

(Impact Factor = 3.050)

[37] **Ashraf, S.**, Abdullah, S., (2020). Emergency decision support modeling for COVID-19 based on spherical fuzzy information. **International Journal of Intelligent Systems**, 1-45. <https://doi.org/10.1002/int.22262>

(Impact Factor = 10.312)

[38] **Ashraf, S.**, Abdullah, S. and Khan, S., (2020). Fuzzy decision support modeling for internet finance soft power evaluation based on sine trigonometric Pythagorean fuzzy information. **Journal of Ambient Intelligence and Humanized Computing**, <https://doi.org/10.1007/s12652-020-02471-4>

(Impact Factor = 4.594)

[39] **Ashraf, S.**, Abdullah, S. and Almagrabi, A., (2020). A New Emergency Response of Spherical Intelligent Fuzzy Decision Process to Diagnose of COVID19. **Soft Computing**, <https://doi.org/10.1007/s00500-020-05287-8>

(Impact Factor = 3.050)

Total Impact Factor: 72.259

Conference Publications:

- **S. Ashraf**, S Abdullah, Spherical fuzzy sets and its Representation of Spherical fuzzy t-norm and t-conorm, “5th International Conference on Recent Advances in Pure and Applied Mathematics” July 2018, Trabzon, Turkey.

CONFERENCES/SEMINARS ATTENDED:

- ✚ Title: 14th Conference on Recent Advances in Mathematical Methods Models and Applications.
Venue: **Lahore School of Economics, Pakistan**
Date: 13-14 April 2019
Nature of Participation: **Invited Speaker**

- ✚ Title: 5TH International Conference on Recent Advances in Pure and Applied Mathematics.
Venue: **Trabzon, Turkey**
Date: 23-27 July 2018
Nature of Participation: **Invited Speaker**

- ✚ Title: One Day International Symposia on Pure & Applied Mathematics.
Venue: University of Sargodha, Sargodha, Pakistan.
Date: Jan 27, 2014
Nature of Participation: Audience

- ✚ Title: 1ST CASPAM Regional Student Olympiad of Mathematics.
Venue: Bahauddin Zakariya University, Multan, Pakistan.
Date: Mar 12, 2014
Nature of Participation: Contestant

- ✚ Title: Two Day International Conference on Pure & Applied Mathematics.
Venue: University of Sargodha, Sargodha, Pakistan.
Date: Mar 09-10, 2015
Nature of Participation: Audience

- ✚ Title: 3rd UMT International Conference on Pure and Applied Mathematics.
Venue: University of Management and Technology, Lahore, Pakistan.
Date: Mar 04-06, 2017.
Nature of Participation: Audience

- ✚ Title: 3rd National Conference on Mathematical Sciences.
Venue: International Islamic University, Islamabad, Pakistan.
Date: April 27-28, 2017.
Nature of Participation: Audience

- ✚ Title: 3rd International Conference on Pure and Applied

Mathematics.

Venue: University of Sargodha, Sargodha, Pakistan.

Date: Nov 10-11, 2017.

Nature of Participation: Audience

LANGUAGE:

- ✚ English
- ✚ Urdu
- ✚ Punjabi

COMPUTER SKILLS:

- ✚ Programming in C++
- ✚ Mathematica
- ✚ Scientific Workplace
- ✚ MS Office
- ✚ LATEX

REFERENCES:

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