Prof. Dr. Muhammad Akram

HEC Approved Ph.D. Supervisor

BRIEF BIOGRAPHY

Muhammad Akram has received MSc degrees in Mathematics and Computer Science, MPhil in (Computational) Mathematics and PhD in (Fuzzy) Mathematics. Dr. Muhammad Akram presently holds the esteemed position of Professor within the Department of Mathematics at the University of the Punjab, Lahore. His scholarly contributions extend to his service at the Punjab University College of Information Technology. Dr. Akram's academic pursuits center around fuzzy numerical methods, fuzzy graphs, fuzzy algebras, and fuzzy decision support systems. With an illustrious record, he has authored 11 influential books in the realm of Fuzzy mathematics, published by reputable sources, alongside an impressive portfolio of over 550 research articles in esteemed international scientific journals. Evidencing his impact, Dr. Akram boasts an H-index of 68 on Google Scholar. Recognized for his exceptional expertise, Stanford University reports consistently position Dr. Akram within the top 2% of scientists globally across the years 2020, 2021, 2022, 2023, and 2024 in the fields of Artificial Intelligence and Image Processing. He won gold medal from Pakistan academy of sciences for year 2023. He also received the Best Research Article Award from the Punjab Higher Education Commission in 2024. His involvement in academia is multifaceted, having served as an Editorial Member for 23 distinguished international academic journals. Moreover, his adeptness as a Reviewer/Referee spans across 156 international journals, including esteemed platforms such as Mathematical Reviews (USA) and Zentralblatt MATH (Germany). A testament to his mentorship, Dr. Akram has successfully guided twenty students through their Ph.D. research endeavors, and presently oversees the scholarly pursuits of five Ph.D. candidates under his tutelage. His unwavering commitment to academia and prolific contributions stand as a testament to his invaluable presence within the academic community.

RESEARCH PROFILE

•Number of Published Books by International Publisher	11
•Number of International/HEC recognized Journal publications	550
•Number of International Book Chapters	09
•Number of Attended International Conferences	09
•$H-$index	68
•Number of Top Foreign Research Collaborators	20
•Reviewer/Referee for International Journals including Mathematical Reviews(USA) and Zentralblatt MATH (Germany).	156

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Education

First class throughout academic career.

Ph.D, *GCU*, Lahore.

M. Phil Mathematics, *GCU*, Lahore.

M.Sc Mathematics, *Punjab University*, Lahore.

M.Sc Computer Science, *Balochistan University*, Quetta.

B.Sc, *University of the Punjab*, Lahore.

PROFESSIONAL EXPERIENCES

05 AUG.2024-Present	**Dean**, *Faculty of Science*, Punjab University.
01JUN.2023-Present	**Chairman**, *Department of Mathematics*, Punjab University, Lahore.
23Nov.2014-Present	**Professor**, *Department of Mathematics*, Punjab University, Lahore.
10May 2012-22Nov.2014	**Associate Professor**, *Department of Mathematics*, Punjab University, Lahore.
14Oct.2002-9May 2012	**Assistant Professor**, *Punjab University College of Information Technology (PUCIT)*, Lahore Campus.
Sep.1997-2001	**Lecturer/Coordinator of Mathematics**, *Center in Computer Excellence (Approved study Center of AIOU)*, Lahore.
2003–2005	**Degree supervisor of BS (CS) program**, *PUCIT*.
2006-2010	**Chairman of Disciplinary Committee**, *PUCIT*.
2006-2010	**Chairman of stock taking verification committee**, *PUCIT*.
2003-2006	**Member of college council**, *PUCIT*.
2006-2013	**Member of admission committee**, *PUCIT*.
2010-2012	**Co-chair of needy based scholarship committee**, *PUCIT*.
2015-Present	**Member of departmental doctoral programme committee**, *DPC*.
2015-Present	**Member of Board of Studies in Mathematics**.
2015-Present	**Member of University's Academic Council**.
2015-Present	**Member of University's Senate**.

Awards

+ Among World's Top 2 % Scientists for years 2020, 2021, 2022, and 2023 in the field of Artificial Intelligence and Image Processing.

+ Won Second position in matriculation at Tahsil level and achieved merit scholarship from

Gujranwala board

+ Departmental Best Teacher Award for Year 2015
+ Received Research Incentive Award from Punjab University since 2004
+ Won Gold Medal and Cash Prize of Rs. 35,000/- from Pakistan Academy of Sciences for Year 2023
+ Received the Best Research Article Award from the Punjab Higher Education Commission in 2024

Teaching

I am teaching following modules:

+ Abstract Algebra
+ Linear Algebra
+ Graph Theory
+ Differential Equations
+ Numerical Analysis
+ Operations Research
+ Discrete Mathematics
+ Fuzzy Systems

RESEARCH INTERESTS

+ Numerical methods for parabolic PDEs
+ Applications of fuzzy systems to numerical methods, graphs and algebraic structures
+ Fuzzy decision support / decision -making systems
+ Fuzzy linear programming models
+ Fuzzy numerical methods

Publications

A0. INTERNATIONAL BOOKS

1. **Akram, M.** and Arooj Adeel, *Multiple Criteria Decision Making Methods with Multi-polar Fuzzy Information*, Studies in Fuzziness and Soft Computing, Springer, DOI: 10.1007/978-3-031-43636-9, **430**(2023).

2. **Akram, M.**, Shumaiza and Alcantud, JCR, *Multi-Criteria Decision Making Methods with Bipolar Fuzzy Sets*, Forum for Interdisciplinary Mathematics, Springer, 2023, pp. 214.

3. **Akram, M.**, Sarwar, M. and Dudek, W.A., *Graphs for the Analysis of Bipolar Fuzzy Information*, Studies in Fuzziness and Soft Computing, Springer, DOI: 10.1007/978-981-15-8756-6, **401**(2021).

4. **Akram, M.** and Luqman, A, *Fuzzy Hypergraphs and Related Extensions* , Studies in Fuzziness and Soft Computing, Springer, DOI: 10.1007/978-981-15-2403-5, **390**(2020).

5. **Akram, M.** and Zafar, F., *Hybrid Soft Computing Models Applied to Graph Theory*, Studies in Fuzziness and Soft Computing, Springer, DOI: 10.1007/978-3-030-16020-3, **380**(2020).

6. **Akram, M.**, m-*Polar Fuzzy Graphs*, Studies in Fuzziness and Soft Computing, Springer, DOI: 10.1007/978-3-030-03751-2, **371**(2019).

7. **Akram, M.**, *Fuzzy Lie Algebras*, Infosys Science Foundation Series in Mathematical Sciences, Springer, 2018, DOI: 10.1007/978-981-13-3221-0.

8. **Akram, M.**, *Single-Valued Neutrosophic Graphs*, Infosys Science Foundation Series in Mathematical Sciences, Springer, 2018, DOI: 10.1007/978-981-13-3522-8.

9. **Akram, M.** and Dar K. H., *Generalized fuzzy* K*-Algebras*, VDM Verlag, 2010, pp.288, ISBN 978-3-639-27095-2.

10. **Akram, M.**, *Bifuzzy* K*-Algebras*, VDM Verlag, 2010, pp.142, ISBN 978-3-639-28648-9.

11. **Akram, M.**, *Computational Methods for Second-Order Parabolic equations*, VDM Verlag, 2010, pp.212 ISBN 978-3-639-2909-12.

A1. INTERNATIONAL BOOK CHAPTERS

1. Ali, G. and **Akram, M.**, *Group Decision-Making Analysis Under Interval-Valued q-rung Orthopair Fuzzy Soft Expert Sets*, In: Sahoo, L., Senapati, T., Yager, R.R. (eds) Real Life Applications of Multiple Criteria Decision Making Techniques in Fuzzy Domain. Studies in Fuzziness and Soft Computing, vol 420, 2023, Springer, Singapore.

2. Naz, S., **Akram, M.**, Fatima, A. and Nadeem, A., *q-Rung Orthopair Fuzzy 2-Tuple Linguistic Hamy Mean Operators for MAGDM with Modified EDAS Method*, In: Sahoo, L., Senapati, T., Yager, R.R. (eds) Real Life Applications of Multiple Criteria Decision

Making Techniques in Fuzzy Domain. Studies in Fuzziness and Soft Computing, vol 420, 2023, Springer, Singapore.

3. Naz, S., **Akram, M.**, Feng, F. and Mahboob, A., *Group decision-making framework with generalized orthopair fuzzy 2-tuple linguistic information*, In: Garg, H. (eds) q-Rung Orthopair Fuzzy Sets. 2022, Springer, Singapore.

4. Naz, S., **Akram, M.** and Saeed, A., *A Hybrid Multiple-Attribute Decision-Making Model Under Complex Q-Rung Orthopair Fuzzy Hamy Mean Aggregation Operators*, In Handbook of Research on Advances and Applications of Fuzzy Sets and Logic, (149-191), 2022, IGI Global.

5. **Akram, M.** & Shabir, M., *Complex T-Spherical Fuzzy N-Soft Sets*, In: Kahraman C., Cebi S., Cevik Onar S., Oztaysi B., Tolga A.C., Sari I.U. (eds) Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation. INFUS 2021. Lecture Notes in Networks and Systems, vol 308. Springer, Cham. https://doi.org/10.1007/978-3-030-85577-2_95.

6. **Akram, M.**, Ali, M. and Allahviranloo, T., *Solution of Complex Bipolar Fuzzy Linear System*, In: Allahviranloo T., Salahshour S., Arica N. (eds) Progress in Intelligent Decision Science. IDS 2020. Advances in Intelligent Systems and Computing, vol 1301, 2021, Springer, Cham. https://doi.org/10.1007/978-3-030-66501-2_73.

7. **Akram, M.**, *Decision Making Method Based on Spherical Fuzzy Graphs*, In: Kahraman C., Otay I. (eds) Spherical Fuzzy Sets Book. Studies in Fuzziness and Soft Computing, 2020, Springer.

8. **Akram, M.**, Saleem, D. and Ghorai, G.*Energy of m-Polar Fuzzy Digraphs*, In: Pal M. Advanced Applications of Graph Theory in Modern Society, 2020, IGI Global.

9. **Akram, M.** and Shahzadi G., *Bipolar Neutrosophic Graphs*, In: Kahraman C., Otay I. (eds) Fuzzy Multi-criteria Decision-Making Using Neutrosophic Sets. Studies in Fuzziness and Soft Computing, **369**(2019), Springer.

B. ARTICLES IN INTERNATIONAL JOURNALS

Year 2024

1. **Akram, M.**, Bilal, M., Shahriari, M., and Allahviranloo, T., *Bipolar fuzzy Fourier transform for bipolar fuzzy solution of the bipolar fuzzy heat equation*, Iranian Journal of Fuzzy Systems, **21** (3)(2024), 19-36.

2. Fatima, S., **Akram, M.** and Zafar, F., *A hybrid decision-making technique based on extended entropy and trapezoidal fuzzy rough number*, Journal of Applied Mathematics and Computing, (2024). https://doi.org/10.1007/s12190-024-02150-z.

3. Muhammad, G. and **Akram, M.**, *Fuzzy fractional generalized Bagley-Torvik equation with fuzzy Caputo gH-differentiability*, Engineering Applications of Artificial Intelligence, **133**(2024), 108265.

4. Sarwar, M., **Akram, M.**, Gulzar, W. and Deveci, M., *Group decision making method for third-party logistics management: An interval rough cloud optimization model*, Journal of Industrial Information Integration, 41(2024), 100658.

5. Muhammad, G., **Akram, M.**, Hussain, N. and Allahviranloo, T., *Fuzzy Langevin fractional delay differential equations under granular derivative*, Information Sciences, **681**(2024), 121250.

6. Nawaz, M., Adeel, A. and **Akram, M.**, *Risk evaluation in failure mode and effect analysis: AHP-VIKOR method with picture fuzzy rough number*, Granular Computing, 9, 69 (2024).

7. **Akram, M.**, Sultan, M., and Deveci, M., *An integrated multi-polar fuzzy N-soft preference ranking organization method for enrichment of evaluations of the digitization of global economy*, Artificial Intelligence Review, 57, 74 (2024) **IF=12**

8. **Akram, M.**, Zahid, K., and Kahraman, C., *A new ELECTRE-based decision-making framework with spherical fuzzy information for the implementation of autonomous vehicles project in Istanbul*, Knowledge-Based Systems, **283**(2024), 111207. **IF=8.8**

9. **Akram, M.**, Ilyas, F., and Deveci, M., *Interval rough integrated SWARA-ELECTRE model: An application to machine tool manufacturing*, Expert Systems with Applications, **238**(2024), 122067. **IF=8.5**

10. **Akram, M.**, Zahid, S., and Deveci, M., *Enhanced CRITIC-REGIME method for decision making based on Pythagorean fuzzy rough number*, Expert Systems with Applications, **238**(2024), 122014. **IF=8.5**

11. Muhammad, G., and **Akram, M.**, Fuzzy fractional epidemiological model for middle east respiratory syndrome coronavirus on complex heterogeneous network using Caputo derivative, Information Sciences, **659**(2024), 120046. **IF= 8.1**

12. **Akram, M.**, and Ullah, I., Solution of Z-number-based multi-objective linear programming models with different membership functions, Information Sciences, **659**(2024), 120100. **IF= 8.1**

13. **Akram, M.**, Noreen, U., and Deveci, M., An outranking method for optimizing anti-aircraft missile system with 2-tuple linguistic m-polar fuzzy data, Engineering Applications of Artificial Intelligence, **132**(2024), 107923. **IF= 8.0**

14. Alcantud, JCR., Khameneh, A. Z., Santos-García, G., **Akram, M.**., A systematic literature review of soft set theory, Neural Computing and Applications, **36**(2024), 8951-8975. **IF= 6.0**

15. Naz, S., **Akram, M.**, Shafiq, K. and Akhtar, K., *Optimal airport selection utilizing power Muirhead mean based group decision model with 2-tuple linguistic q-rung orthopair fuzzy information* , International Journal of Machine Learning and Cybernetics, **15**(2024), 303-340. **IF=5.6**

16. **Akram, M.**, Yousuf, M. and Allahviranloo, T. An analytical study of Pythagorean fuzzy fractional wave equation using multivariate Pythagorean fuzzy fourier transform under generalized Hukuhara Caputo fractional differentiability, Granular Computing, 9, 15 (2024). **IF= 5.5**

17. Habib, A., **Akram, M.**, Optimizing traveling salesman problem using tabu search meta-heuristic algorithm with Pythagorean fuzzy uncertainty, Granular Computing, 9, 16 (2024). **IF= 5.5**

18. **Akram, M.**, Habib, A., A Novel Pythagorean fuzzy pert approach to measure criticality with multi-criteria in project management problems, Granular Computing, 9, 36 (2024). **IF= 5.5**

19. **Akram, M.**, Shareef, A, Kenani, A.A., Pythagorean fuzzy incidence graphs with application in one-way toll road network, Granular Computing, 9, 39 (2024). **IF= 5.5**

20. **Akram, M.**, Zahid, S., Kenani, A.A., Multi-Criteria group decision-making for evaluating efficient and smart mobility sharing systems using pythagorean fuzzy rough numbers, Granular Computing,9, 50 (2024). **IF= 5.5**

21. **Akram, M.**, Ahmad, U., Al-Shamiri, M.M.A. et al. Algorithms for computing Pythagorean fuzzy average edge connectivity of Pythagorean fuzzy graphs, Journal of Applied Mathematics and Computing, 70 (2024), 375-416. **IF= 2.2**

Year 2023

1. **Akram, M.**, Siddique, S. and Alcantud, J. C. R., *Connectivity indices of m-polar fuzzy network model, with an application to a product manufacturing problem*, Artificial Intelligence Review, **56** (8)(2023), 7795-7838. **IF=12**

2. **Akram, M.**, Naz, S. and Abbas, T., *Complex q-rung orthopair fuzzy 2-tuple linguistic group decision-making framework with Muirhead mean operators*, Artificial Intelligence Review, **56**(2023), 10227-10274. **IF=12**

3. **Akram, M.**, Habib, A. and Deveci, M., *Application of critical path method in ePropertWatch Plan using Gaussian Pythagorean fuzzy numbers*, IEEE Transactions on Fuzzy systems, (2023), https://doi.org/10.1009/TFUZZ.2023.3321720. **IF=11.9**

4. **Akram, M.**, Zahid, K. and Deveci, M., *Multi-criteria group decision-making for optimal management of water supply with fuzzy ELECTRE-based outranking method*, Applied Soft Computing, **143**(2023), 110403. **IF=8.7**

5. **Akram, M.**, Zahid, K. and Kahraman, C., *Integrated outranking techniques based on spherical fuzzy information for the digitalization of transportation system*, Applied Soft Computing, **134**(2023), 109992. **IF=8.7**

6. **Akram, M.**, Nawaz, H. S. and Kahraman, C., *Rough pythagorean fuzzy approximations with neighborhood systems and information granulation*, Expert Systems with Applications, **218**(2023), 119603. **IF=8.5**

7. **Akram, M.**, Nawaz, H. S. and Deveci, M., *Attribute reduction and information granulation in Pythagorean fuzzy formal contexts*, Expert Systems with Applications, **222**(2023), 119794. **IF=8.5**

8. **Akram, M.**, Noreen, U. and Deveci, M., *Enhanced ELECTRE II method with 2-tuple linguistic m-polar fuzzy sets for multi-criteria group decision making*, Expert Systems with Applications, **213**(2023), 119237. **IF=8.5**

9. **Akram, M.**, Muhammad, G. and Allahviranloo, T., *Explicit analytical solutions of an incommensurate system of fractional differential equations in a fuzzy environment*, Information Sciences, **645**(2023), 119372. **IF=8.1**

10. **Akram, M.**, Ramzan, N. and Deveci, M., *Linguistic Pythagorean fuzzy CRITIC-EDAS method for multiple-attribute group decision analysis*, Engineering Applications of Artificial Intelligence, **119**(2023), 105777. **IF=8**

11. **Akram, M.**, Bibi, R. and Deveci, M., *An outranking approach with 2-tuple linguistic Fermatean fuzzy sets for multi-attribute group decision-making*, Engineering Applications of Artificial Intelligence, **121**(2023), 105992. **IF=8**

12. **Akram, M.**, Khan, A., Luqman, A., Senapati, T. and Pamucar, D., *An extended MARCOS method for MCGDM under 2-tuple linguistic q-rung picture fuzzy environment*, Engineering Applications of Artificial Intelligence, **120**(2023), 105892. **IF=8**

13. **Akram, M.**, Ali, G. and Alcantud, J. C. R., *A novel group decision-making framework under Pythagorean fuzzy N-soft expert knowledge*, Engineering Applications of Artificial Intelligence, **120**(2023), 105879. **IF=8**

14. **Akram, M.**, Ramzan, N. and Deveci, M., *Linguistic Pythagorean fuzzy CRITIC-EDAS method for multiple-attribute group decision analysis*, Engineering Applications of Artificial Intelligence, **119**(2023), 105777. **IF=8**

15. Sarkar, A., Moslem, S., Esztergar-Kiss, D., **Akram, M.** and Senapati, T., *A hybrid approach based on dual hesitant q-rung orthopair fuzzy frank power partitioned heronian mean aggregation operators for estimating sustainable urban transport solutions*, Engineering Applications of Artificial Intelligence, **124**(2023), 106505.. **IF=8**

16. **Akram, M.**, Zahid, K. and Kahraman, C., *A PROMETHEE based outranking approach for the construction of Fangcang shelter hospital using spherical fuzzy sets*, Artificial Intelligence in Medicine, **135**(2023), 102456. **IF=7.5**

17. **Akram, M.**, Sultan, M. and Alcantud, J. C. R., *An integrated ELECTRE method for selection of rehabilitation center with m-polar fuzzy N-soft information*, Artificial Intelligence in Medicine, **135**(2023), 102449. **IF=7.5**

18. **Akram, M.** and Muhammad, G., *Analysis of incommensurate multi-order fuzzy fractional differential equations under strongly generalized fuzzy Caputo's differentiability*, Granular Computing, **8** (4)(2023), 809-825. **IF= 5.5**

19. **Akram, M.**, Ihsan, T. and Allahviranloo, T., *Solving Pythagorean fuzzy fractional differential equations using Laplace transform*, Granular Computing, **8** (3)(2023), 551-575. **IF= 5.5**

20. Sarwar, M., **Akram, M.** and Shahzadi, S., *Distance measures and δ-approximations with rogh complex fuzzy models*, Granular Computing, **8** (2023), 893-916. **IF= 5.5**

21. Feng, F., Zhang, C., **Akram, M.** and Zhang, J., *Multiple attribute decision making based on probabilistic generalized orthopair fuzzy sets*, Granular Computing, **8** (4)(2023), 863-891. **IF= 5.5**

22. **Akram, M.**, and Zahid, S., *Group decision-making method with Pythagorean fuzzy rough number for the evaluation of best design concept*, Granular Computing, **8** (2023), 1121-1148. **IF=5.5**

23. **Akram, M.**, and Bibi, R., *Multi-criteria group decision-making based on an integrated PROMETHEE approach with 2-tuple linguistic Fermatean fuzzy sets*, Granular Computing, **8** (2023), 917-941. **IF= 5.5**

24. **Akram, M.**, and Ihsan, T., *Solving Pythagorean fuzzy partial fractional diffusion model using the Laplace and Fourier transforms*, Granular Computing, **8** (4)(2023), 689-707. **IF= 5.5**.

25. **Akram, M.**, Yousuf, M. and Bilal, M., *Solution method for fifth order fuzzy initial value problem*, Granular Computing, **8** (2023), 1229-1252. **IF= 5.5**

26. **Akram, M.** and Bilal, M., *Analytical solution of bipolar fuzzy heat equation using homotopy perturbation method*, Granular Computing, **8** (2023), 1253-1266. **IF= 5.5**

27. **Akram, M.** and Ashraf, M., *Multi-criteria group decision-making based on spherical fuzzy rough numbers*, Granular Computing, **8** (2023), 1267-1298. **IF= 5.5**

28. **Akram, M.** and Zahid, K., *Mukti-criteria group decision-making for energy production from municipal solid waste in Iran based on spherical fuzzy sets*, Granular Computing, **8** (2023), 1299-1323. **IF= 5.5**

29. **Akram, M.**, Yousuf, M. and Allahviranloo, T., *Solution of the Pythagorean fuzzy wave equation with Pythagorean fuzzy Fourier sine transform*, Granular Computing, **8** (2023), 1149-1171. **IF= 5.5**

30. **Akram, M.**, Ullah, I. and Allahviranloo, T., *An interactive method for the solution of fully Z-number linear programming models*, Granular Computing, **8** (2023), 1205-1227. **IF= 5.5**

31. **Akram, M.**, Shahzadi, S., Shah, S. M. U. and Allahviranloo, T., *A fully Fermatean fuzzy multi-objective transportation model using and extended DEA technique*, Granular Computing, **8** (2023), 1173-1204. **IF= 5.5**

32. **Akram, M.**, Niaz, Z. and Feng, F., *Extended CODAS method for multi-attribute group decision-making based on 2-tuple linguistic Fermatean fuzzy Hamacher aggregation operators*, Granular Computing, **8** (3)(2023), 441-466. **IF= 5.5**

33. **Akram, M.** and Martino, A., *Multi-attribute group decision making based on T-spherical fuzzy soft rough average aggregation operators*, Granular Computing, (2022), **8** (1)(2023), 171-207. **IF=5.5**

34. **Akram, M.**, Khan, A. and Ahmad, U., *Extended MULTIMOORA method based on 2-tuple linguistic Pythagorean fuzzy sets for multi-attribute group decision-making*, Granular Computing, **8** (2)(2023), 311-332. **IF=5.5**

35. **Akram, M.**, Muhammad, G. and Ahmad, D., *Analytical solution of the Atangana-Baleanu-Caputo fractional differential equations using Pythagorean fuzzy sets*, Granular Computing, **8** (2023), 667-687. **IF=5.5**

36. Naz, S., **Akram, M.**, Hassan, M. M. U. and Fatima, A., *A hybrid DEMATEL-TOPSIS approach using 2-tuple linguistic q-rung orthopair fuzzy information and its application in renewable energy resource selection*, International Journal of Information Technology & Decision Making, (2023), https://doi.org/10.1142/S0219622023500323. **IF=4.9**

37. Alcantud, J. C. R., Santos-García, G. and **Akram, M.**, *A novel methodology for multi-agent decision-making based on N-soft sets*, Soft Computing, (2023), https://doi.org/10.1007/s00500-023-08522-0. **IF=4.1**

38. **Akram, M.**, Shahzadi, G. and Davvaz, B., *Decision-making model for internet finance soft power and sportswear brands based on sine-trigonometric Fermatean fuzzy information*, Soft Computing, **27** (4)(2023), 1971-1983. **IF=4.1**

39. **Akram, M.**, Shahzadi, S., Shah, S. M. U. and Allahviranloo, T., *An extended multi-objective transportation model based on Fermatean fuzzy sets*, Soft Computing, (2023), https://doi.org/10.1007/s00500-023-08117-9. **IF=4.1**

40. **Akram, M.**, Shahzadi, S., Bibi, R. and Santos-Garcıa, G., *An extended multi-objective transportation model based on Fermatean fuzzy sets*, Soft Computing, (2023), https://doi.org/10.1007/s0050023-08158-0. **IF=4.1**

41. Adeel, A., **Akram, M.** and Cagman, N., *Decision-making analysis based on hesitant fuzzy N-Soft ELECTRE-I approach*, Soft Computing, **27**(2023), 1971-1983. **IF=4.1**

42. Naz, S., **Akram, M.** and Muzammal, M., *Group decision-making based on 2-tuple linguistic T-spherical fuzzy COPRAS method*, Soft Computing, **27**(2023), 2873-2902. **IF=4.1**

43. Naz, S., **Akram, M.**, Davvaz, B. and Saadat, A., *A new decision-making framework for selecting the river crossing project under dual hesitant q-rung orthopair fuzzy 2-tuple linguistic environment*, Soft Computing, **27** (17)(2023), 12021-12047. **IF=4.1**

44. **Akram, M.**, Amjad, U., Alcantud, J. C. R. and Santos-Garcıa, G.,*Complex Fermatean fuzzy N-soft sets: A new hybrid model with applications*, Journal of Ambient Intelligence and Humanized Computing, **14** (7)(2023), 8765-8798. **IF=3.662**

45. Naz, S., **Akram, M.**, Hassan, M. M. U. and Fatima, A., *A hybrid DEMATEL-TOPSIS approach using 2-tuple linguistic q-rung orthopair fuzzy information and its application in renewable energy resource selection*, International Journal of Information Technology & Decision Making, (2023), https://doi.org/10.1142/S0219622023500323. **IF=3.508**

46. **Akram, M.**, Ali, G. and Alcantud, J. C. R., *A new method of multi-attribute group decision making based on hesitant fuzzy soft expert information*, Expert Systems, (2023), e13357. **IF=2.812**

47. **Akram, M.**, Naz, S., Feng, F. and Shafiq, A., *Assessment of hydropower plants in Pakistan: Muirhead mean-based 2-tuple linguistic T-spherical fuzzy model combining SWARA with COPRAS*, Arabian Journal for Science and Engineering, **48** (5)(2023), 5859-5888. **IF=2.807**

48. **Akram, M.**, Naz, S., Feng, F., Ali, G. and Shafiq, A., *Extended MABAC method based on 2-tuple linguistic T-spherical fuzzy sets and Heronian mean operators: An application to alternative fuel selection*, AIMS Mathematics, **8** (5)(2023), 10619-10653. **IF=2.739**

49. **Akram, M.**, Sultan, M., Adeel, A. and Al-Shamiri, M. M. A., *Pythagorean fuzzy N-soft PROMETHEE approach: A new framework for group decision making*, AIMS Mathematics, **8** (8)(2023), 17354-17380. **IF=2.739**

50. **Akram, M.**, Ramzan, N., Luqman, A. and Santos-Garcıa, G., *An integrated MULTI-MOORA method with 2-tuple linguistic Fermatean fuzzy sets: Urban quality of life selection problem*, AIMS Mathematics, **8** (2)(2023), 2798-2828. **IF=2.739**

51. **Akram, M.**, Shah, S. M. U., Al-Shamiri, M. M. A. and Edalatpanah, S. A., *Extended DEA method for solving multi-objective transportation problem with Fermatean fuzzy sets*, AIMS Mathematics, **8** (2023), 924-961. **IF=2.739**

52. **Akram, M.**, Muhammad, G., Allahviranloo, T. and Ali, G., *A solving method for two-dimensional homogeneous system of fuzzy fractional differential equations*, AIMS Mathematics, **8** (1)(2023), 228-263. **IF=2.739**

53. Ali, G. A., Sariera, T. M. A. A., **Akram, M.**, Sulaiman, A. and Olayah, F., *Detection and classification of hemorrhages in retinal images*, Computer Systems Science and Engineering, **44** (2)(2023), 1601-1616. **IF=2.7**

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C. PUBLICATIONS IN REFEREED INTERNATIONAL CONFERENCES

1. Liu Y. L., Ren M. Y. and **Akram, M.**, *Positive implication R_0-algebras*, IEEE Xplore Proceedings of the 2009 WRI World Congress on Computer Science and Information Engineering, 31 March - 2 April 2009, Los Angeles, California USA.

2. **Akram, M.** and Dar, K. H., *Interval-valued bifuzzy graphs* Proc. Intern. Confer. on Algebra 2010; Advances in Algebraic Structures, World Sci. Pub. Co., 2011. 1-10.

3. **Akram, M.** and Parvathi. R., *Properties of intuitionistic fuzzy line graphs*, Proc. Intern. Confer. on Intuitionistic Fuzzy Sets ICIFS'2012, Sofia, Bulgaria.

4. M.G. Karunambigai, **Akram, M.**, K. Palanive and S. Sivasankar, *Domination in bipolar fuzzy graphs*, Fuzzy IEEE 2013.

D. Invited Talks/Attended International Conferences

1. International Conference on Recent Advances in Applied Mathematics (COMSATS Institute of Information Technology, Department of Mathematics, Lahore, December 16-17, 2015)
2. CASPAM International Conference on Mathematics and Applications (Zakariya University Multan, Pakistan, November 6-7, 2017)
3. 1st PU International Conference on Gravitation and Cosmology, Lahore-Pakistan (University of the Punjab, January 27-31, 2019)
4. International Conference on Intelligent Decision Science (Online, Istanbul, Turkey, on August 7-8, 2020).
5. International Conference on Impact of Mathematics in Modern Era (The Islamia University of Bahawalpur, April 08, 2021)
6. INFUS 2021: International Conference on Intelligent and Fuzzy Systems (Online, Istanbul Technical University, August 24-26, 2021)
7. 4th PU International Conference on Gravitation and Cosmology (University of the Punjab, November 22-25, 2021)
8. International Conference on Mathematical Sciences (The Islamia University of Bahawalpur, March 28- 29, 2022)
9. 2nd Garrison International conference on Pure and Applied Mathematics (Lahore Garrison University, June 16-17, 2022)

E. EDITORIAL BOARDS

+ Journal of Applied Mathematics and Computing (Springer)
+ Iranian Journal of Fuzzy Systems (Iran)
+ Granular Computing (Springer)
+ Quasigroups and Related Systems (Poland)
+ Punjab University Journal of Mathematics (Pakistan)
+ Operational Research in Engineering Sciences: Theory and Applications (Serbia)
+ Decision Making: Applications in Management and Engineering (Serbia)
+ Reports in Mechanical Engineering (Serbia)
+ Journal of Mathematical Analysis (Kosova)

- Annals of Fuzzy Mathematics and Informatics (Korea)
- Neutrosophic Sets and Systems (USA)
- Numerical Analysis and Applicable Mathematics (Spain)
- Journal of Computational and Cognitive Engineering (India)
- Journal of Uncertainty in Mathematics Science (Iran)
- Fuzzy Optimization and Modeling Journal (Iran)
- Journal of Fuzzy Extension and Applications (Iran)
- Big Data and Computing Visions (Iran)
- Annals of Optimization Theory and Practice (Iran)
- Journal of Mahani Mathematical Research (Iran)
- Transactions on Fuzzy Sets and Systems (Iran)
- Computational Algorithms and Numerical Dimensions (Iran)
- Journal of Fuzzy Logic and Modeling in Engineering (Turkey)
- Mathematical Sciences Letters (Egypt)

F. REFEREEING AND REVIEWING

1. Abstract and Applied Analysis (Hindawi, USA)
2. Advances in Decision Sciences (Hindawi, USA)
3. Advances in Computational Intelligence
4. Advances in Difference Equations (Springer)
5. Advances in Fuzzy Mathematics (India)
6. Advances in Fuzzy Sets and Systems (Pushpa Publishing House, India)
7. Advances in Operations Research (Hindawi, USA)
8. Advanced Research in Pure Mathematics (Institute of Advanced Scientific Research, USA)
9. Afrika Matematika (Springer)
10. AIMS Mathematics
11. Algebras, Groups and Geometries (USA)

12. Analele Universitatii Din Oradea Fascicola Matematica (Romania)
13. Annals of Fuzzy Mathematics and Informatics (Korea)
14. Annals of University of Craiova, Math. Comp. Sci. Ser (Romania)
15. Applied Mathematics, (Scientific Research Publishing)
16. Applications and Applied Mathematics: An International Journal, (USA)
17. Applied Mathematical Sciences (Bulgaria)
18. Applied Mathematics and Computing (Springer)
19. Applied Mathematics Letter (Elsevier)
20. Applied Mathematics and Information Sciences
21. Applied Soft Computing Journal (Elsevier)
22. Ars Combinatoria (Canada)
23. Artificial Intelligence Review (Springer)
24. Asian Journal of Mathematics and Computer Research
25. Beni-Suef University Journal of Basic and Applied Sciences
26. British Journal of Mathematics & Computer Science
27. Buletinul Acad. Stiinte Rep. Moldova (Moldova)
28. Bulletin of the Allahabad Mathematical Society (India)
29. Bulletin of the Malaysian Mathematical Sciences Society (Malaysia)
30. Bulletin of Mathematical Analysis and Applications (Kosova)
31. Bulletin of International Mathematical Virtual Institute
32. Calcutta Mathematical Society
33. CAAI Transactions on Intelligence Technology
34. Cogent Mathematics (Taylor & Francis)
35. Cognitive Systems Research (Elsevier)
36. Cogent Mathematics (Taylor & Francis)
37. Cognitive Computation

38. Communications of the Korean Mathematical Society
39. Communications in Statistics - Theory and Methods (Taylor and Francis)
40. Computational and Applied Mathematics (Springer)
41. Computers and Mathematics with Applications (Elsevier)
42. Computing (Springer)
43. Computer Modeling in Engineering & Sciences:
44. Computer Methods and Programs in Biomedicine (Springer)
45. Complex & Intelligent Systems, (Springer)
46. Discrete Dynamics in Nature and Society (Hindawi, USA)
47. Discrete Mathematics (Elsevier)
48. Electronic Research Archive
49. Discrete Mathematics, Algorithms and Applications (World Scientific)
50. Engineering Science and Technology, an International Journal (Elsevier)
51. Entropy: An Open Access Journal from MDPI
52. European Journal of Pure and Applied Mathematics
53. Evolving Systems (Springer)
54. Expert Systems (Wiley Online Library)
55. Expert Systems With Applications (Elsevier)
56. Facta Universitatis, Series: Mathematics and Informatics
57. Filomat (Serbia and Montenegro)
58. Future Generation Computer Systems (Elsevier)
59. Fuzzy Information and Engineering (Springer)
60. Fuzzy Sets and Systems (Elsevier)
61. GAZI UNIVERSITY JOURNAL OF SCIENCE
62. Group Decision and Negotiation (Springer)
63. Hacettepe Journal of Mathematics and Statistics (Turkey)

64. IEEE Access Journal
65. IEEE Transactions on Fuzzy Systems
66. IEEE Transactions on Industrial Informatics
67. IEEE Transactions on Automation Science and Engineering
68. Indian Journal of Pure and Applied Mathematics, (Springer)
69. Information Processing Letters (Elsevier)
70. Information Fusion (Elsevier)
71. Information Sciences (Elsevier)
72. Information: An Open Access Journal from MDPI
73. International Journal of Algebra and Statistics
74. International Journal of Approximate Reasoning (Elsevier)
75. International Journal of Applied Mathematics & Computer Science (Poland)
76. International Journal of Computational Mathematics (Hindawi, USA)
77. International Journal of Computing Science and Mathematics
78. International Journal of Computer Mathematics (Taylor and Francis)
79. International Journal of Fuzzy Systems (Taiwan)
80. International Journal of Fuzzy Computation and Modelling
81. International Journal of Information and Systems Sciences (Canada)
82. International Journal of Machine Learning and Cybernetics (Springer)
83. International Journal of Mathematics and Statistics (China)
84. International Journal of Mathematics and Mathematical Sciences (Hindawi, USA)
85. Italian Journal of Pure and Applied Mathematics (Italy)
86. International Mathematical Forum (Bulgaria)
87. International Journal of Fuzzy System Applications
88. International Journal for Uncertainty Quantification
89. International Journal of Information Technology & Decision Making (World Scientific)

90. International Journal of Fuzzy Logic and Intelligent Systems
91. International Journal of Computer Mathematics (Wiley Online Library)
92. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems (World Scientific)
93. Iranian journal of fuzzy systems
94. Journal of Algebra and Related Topics (Iran)
95. Journal of Algebraic Systems
96. Journal of Experimental & Theoretical Artificial Intelligence
97. Journal of Ambient Intelligence and Humanized Computing (Springer)
98. Journal of Applied Mathematics (Hindawi, USA)
99. Journal of Discrete Mathematics (Hindawi, USA)
100. Journal of Environmental Management
101. Journal of Environmental Management (Elsevier)
102. Journal of Fuzzy Mathematics (USA)
103. Journal of Generalized Lie Theory and Applications (Estonia, Finland)
104. Journal of Hyperstructures
105. Journal of the Indonesian Mathematical Society
106. Journal of Intelligent and Fuzzy Systems (IOS Press)
107. Journal of King Saud University - Computer and Information Sciences
108. Journal of Mathematics (Hindawi, USA)
109. Journal of Mathematical Analysis
110. Journal of Mahani Mathematical Research Center
111. Journal of Mathematical Extension
112. Journal of Mathematics and Statistics, (USA)
113. Journal of Mahani Mathematical Research Center, Iran
114. Journal of New Theory , (Turkey)
115. Journal of Nonlinear Sciences and Applications

116. Journal of Taibah University for Science (Taylor and Francis)
117. Knowledge-Based Systems (Elsevier)
118. Kragujevac Journal of Mathematics (Serbia)
119. Kuwait Journal of Science
120. Mathematical Reviews (USA)
121. Mathematics in Computer Science (Springer)
122. Mathematical Biosciences and Engineering
123. Management Decision
124. Mathematics: An Open Access Journal from MDPI
125. Mathematics and Computers in Simulation (Elsevier)
126. Mathematical and Computational Applications: An Open Access Journal from MDPI
127. Mathematical Modelling and Analysis- VGTU Journals.
128. Mathematical Problems in Engineering (Hindawi, USA)
129. Matematicki Vesnik
130. Measurement (Elsevier)
131. Medical & Biological Engineering & Computing (Springer)
132. Middle East Journal of Scientific Research
133. Numerical Algorithms (Springer)
134. Neural Computing and Applications (Springer)
135. New Trends in Mathematical Sciences, (Turkey)
136. Proceedings of the Jangjeon Mathematical Soiciety (Korea)
137. Quasigroups and Related Systems (Poland)
138. Science Asia (Thailand)
139. SCIENCE CHINA Information Sciences (Springer)
140. Scientia Iranica
141. Scientific World Journal (Hindawi, USA)

142. Sigma Journal of Engineering and Natural Sciences
143. Science of the Total Environment
144. SN Operations Research Forum
145. Soft Computing (Springer)
146. Songklanakarin Journal of Science and Technology
147. Southeast Asian Bulletin of Mathematics (China)
148. SN Applied Sciences, (Springer)
149. Symmetry: An Open Access Journal from MDPI
150. Tbilisi Mathematical Journal
151. Thai Journal of Mathematics (Thailand)
152. The Bulletin of the Iranian Mathematical Society (Iran)
153. The Journal of Analysis (Springer)
154. Utilitas Mathematica (Canada)
155. World Applied Sciences Journal (Iran)
156. Zentralblatt MATH (Germany)

G. LIST OF FOREIGN RESEARCH FELLOWS

1. Prof. Dr. W. Pedrycz (Canada)
2. Prof. Dr. K. T. Atanassov (Bulgaria)
3. Prof. Dr. C. Kahraman (Turkey)
4. Prof. Dr. T. Allahviranloo (Turkey)
5. Prof. Dr. M. Deveci (Turkey)
6. Prof. Dr. K. P. Shum (Hong Kong)
7. Prof. Dr. Wieslaw A. Dudek (Poland)
8. Prof. Dr. J. C. R. Alcantud (Spain)
9. Prof. Dr. Y. B. Jun (Korea)
10. Prof. Dr. F. Feng (China)
11. Prof. Dr. H. S. Kim (Korea)
12. Prof. Dr. B. Davvaz (Iran)
13. Prof. Dr. A. Borumand Saeid (Iran)
14. Prof. Dr. J. Zhan (China)
15. Prof. Dr. V. L. Fotea (Romania)
16. Prof. Dr. F. Smarandache (USA)
17. Prof. Dr. P. Liu (China)
18. Prof. Dr. D. Pamucar (Serbia)
19. Prof. Dr. R. Parvathi (India)
20. Prof. Dr. M. Pal (India)

H. Ph.D. Students

1. Ather Ashraf (Title: Spatial Fuzzy Intelligence for Land Suitability Model, 2012–2015)
2. Muhammad Arif Butt (Title: Fuzzy Decision-making Systems for Operating System Kernel, 2013–2019)
3. Miss Shaista Habib (Title: Fuzzy Decision Support Systems for Tunnel Farming in Pakistan, 2013–2019)
4. Miss Musavarah Sarwar (Title: Novel Decision-Making Methods based on m-Polar Fuzzy Graphs, 2014–2017)
5. Miss Sundas Shahzadi (Title: Multi-Attribute Decision-Making Approaches Based on Intuitionistic Fuzzy Soft Graphs, 2014–2017)
6. Miss Fariha Zafar (Title: Soft Rough Fuzzy Graphs with Applications, 2015–2018)
7. Miss Hafsa Masood Malik (Title:Intuitionistic Fuzzy Rough Graphs With Applications, 2015-2018)
8. Miss Arooj Adeel (Novel Hybrid Models Based on Hesitant Fuzzy Sets, 2016–2019)
9. Mr. Ghous Ali (Decision-Making Methods Based on m-Polar Fuzzy N-Soft Rough Sets, 2016–2019)
10. Miss Neha Waseem (m-Polar Fuzzy Elimination and Choice Translating Reality Methods, 2016–2020)
11. Miss Anam Luqman (Granulation Of Network Models Under Fuzzy Hybrid Information, 2017–2020)
12. Muhammad Saqib (Numerical methods for bipolar fuzzy differential equations, 2017–2020)
13. Miss Gulfam Shahzadi (Hybrid Decision-Making Models Based on q-Rung Orthopair Fuzzy Information, 2017–2021)
14. Miss Muzzamal Sitara (Extensions of graph structures under q-rung picture fuzzy environment, 2017–2021)
15. Miss Shumaiza Dastgeer (Extension of Multi-Criteria Decision Making Methods using q-Rung Orthopair Fuzzy Information, 2018–2022)
16. Miss Saba Saddique (Connectivity of specific fuzzy graphs, 2018-2022)
17. Miss Saba Nawaz (Granular Computing with Pythagorean Fuzzy Information, 2019–2022)
18. Miss Kiran Zahid (Outranking methods for multi-criteria decision making with spherical fuzzy sets, 2021-2023)

19. Miss Amna Habib (Algorithms for network based models with Pythagorean fuzzy information, 2021-2023)
20. Mr. Ghulam Muhammad (Analytical solutions of fuzzy linear fractional ordinary differential equations, 2021-2023)
21. Miss Farwa Ilyas (In process, 2022-2024)
22. Mr. Inayat Ullah (In process, 2022-2024)
23. Miss Maheen Sultan (In process, 2022-2025)
24. Miss Shajeea Jamil (In process, 2021-2026)

I. M.PHIL. STUDENTS

1. Mr. Imran Javed (Title: Intuitionistic Fuzzy Logic Control for Washing Machines, 2011-2014)
2. Miss Saira Nawaz (Title: Regularity in Fuzzy Soft Graphs, 2013 - 2015)
3. Miss Fariha Zafar (Title: Characterization of Fuzzy Soft Trees, 2013 - 2015)
4. Mr. Muhammad Tahir (Title: Fuzzy Soft Lines Graphs, 2013 - 2015)
5. Miss Rabia Akmal (Title: On m-polar Fuzzy Graphs Structures, 2013 - 2015)
6. Miss Neha Waseem (Title: Domination in $m-$ polar fuzzy graphs, 2014 - 2016)
7. Miss Hafiza Reheela Younas (Title: Certain properties of irregular m-polar fuzzy graphs, 2014 - 2016)
8. Miss Arooj Adeel (Title: On $m-$ polar fuzzy labeling graphs, 2014 - 2016)
9. Miss Anam Luqman, (Title: Bipolar Neutrosophic Hypergraphs with Applications, 2015 - 2017)
10. Miss Muzzamal Sitara, (Title: Bipolar Neutrosophic Graphs Structures With Applications, 2015 - 2017)
11. Miss Maryam Nasir, (Title: Bipolar Neutrosophic Competition Graphs With Applications, 2015 - 2017)
12. Miss Saba Siddique, (Title: A Study on Neutrosophic Graphs, 2015 - 2017)
13. Miss Gulfam Shahzadi (Title: m-Polar Fuzzy Hypergraphs, 2016 - 2018)
14. Miss Sidra Sayad (Title: A Study on Rough Neutrosophic Digraphs, 2016 - 2018)
15. Miss Shumaiza Dastgeer (Title: TOPSIS and ELECTR-I Decision Making Models under Bipolar Fuzzy Environment, 2016 - 2018)

16. Miss Maham Arhad (Title: Fuzzy Rough Digraphs with Applications, 2016 - 2018)
17. Miss Nabeela Ishfaq (Title: Neutrosophic Rough Digraphs with Applications, 2016 - 2018)
18. Miss Hina Gulzar (Title: Single-Valued Neutrosophic K-Algebras, 2017 - 2019)
19. Miss Amna Habib (Title: q-Rung Picture Fuzzy Graphs with Applications, 2017 - 2019)
20. Miss Farwa Ilyas (Title: Group Decision Making Methods Based on Pythagorean Fuzzy Model, 2017 - 2019)
21. Miss Jawaria Mohsan Dar (Title: Pythagorean Fuzzy Graphs with Applications, 2017 - 2019)
22. Mr. Ghulam Muhammad (Title: Bipolar Fuzzy Linear System of Equations, 2017 - 2019)
23. Mr. Danish Saleem (Title: Certain Notions on Spherical Fuzzy Graphs, 2017 - 2019)
24. Miss Kiran Zahid, (Title: Decision Making Approaches under Complex Pythagorean Fuzzy Information, 2018 - 2020)
25. Miss Ayesha Khan (Title: Complex Pythagorean Fuzzy Dombi Aggregation Operators, 2018 - 2020)
26. Miss Ayesha Bashir (Title: Complex q-Rung Orthopair Fuzzy Aggregation Operators, 2018 - 2020)
27. Miss Aqsa Sattar (Title: Complex Pythagorean Fuzzy Competition Graphs, 2018 - 2020)
28. Mr. Muhammad Ali (Title: Methods for Bipolar Fuzzy Linear System of Equations, 2018 - 2020)
29. Miss Maria Shabir (Title: Complex Spherical Fuzzy N-Soft Sets, 2019 - 2021)
30. Miss Rukhsar (Title: Complex Pythagorean Fuzzy Threshold Graphs, 2019 - 2021)
31. Mr. Inayat Ullah (Title: Pythagorean Fuzzy Linear Programming, 2019 - 2021)
32. Miss Umaira Amjad (Title: Complex Bipolar Fuzzy N-Soft Sets, 2019 - 2021)
33. Miss Noreen Mustafa (Title: Complex Fuzzy Threshold Graphs, 2019 - 2021)
34. Miss Faiza Wasim (Title: Complex Pythagorean Fuzzy N-Soft Sets, 2019 - 2021)
35. Miss Maheen Sultan (Title: Integrated decision-making methods with m-polar fuzzy N-soft sets, 2020 - 2022)
36. Miss Naila Ramzan (Title: Extended decision-making methods with linguistic Fermatean fuzzy sets, 2020 - 2022)

37. Miss Tayyaba Ihsan (Title: Analytical study to find the solution of fuzzy differential equation using Laplace operator, 2020 - 2022)

38. Miss Uzma Noreen (Title: Integrated decision-making methods with 2-tuple linguistic m-polar fuzzy sets, 2020 - 2022)

39. Miss Rabia Bibi (Title: Enhanced decision-making methods with 2tuple linguistic Fermatean fuzzy sets, 2020 - 2022)

40. Miss Zahra Niaz (Title: Extended CODAS and WASPAS methods under 2-tuple linguistic Fermatean fuzzy sets, 2020 - 2022)

41. Mr. Muhammad Umer (Title: Transportation model under Fermatean fuzzy information, 2020 - 2022)

42. Miss Sadaf Zahid (Title: Decision making methods with Pythagorean fuzzy rough number, 2021 - 2023)

43. Miss Mehwish (Title: Decision analysis with spherical fuzzy rough number, 2021 - 2023)

44. Mr. Muhammad Yousuf (Title: Analytical solution of the Pythagorean fuzzy wave equation, 2021 - 2023)

45. Mr. Muhammad Bilal (Title: Analytical solution of bipolar fuzzy heat equation, 2021 - 2023)

46. Urooj Fatima (Title: Decision-Making Methods Based on Pythagorean Fuzzy Rough Numbers, 2022 - 2024)

47. Mavera Nawaz (Title: Extended Decision-Making Methods with Picture Fuzzy Rough Information, 2022 - 2024)

48. Arooj Hashmi (Title: Integrated Decision-Making Methods with Picture Fuzzy Rough Numbers, 2022 - 2024)

49. Safina Azam (Title: Decision-Making Methods with Spherical Fuzzy Rough Numbers, 2022 - 2024)

J. M.PHIL. STUDENTS in Progress

1. Irum Batool

2. Nimra Khan

3. Ayesha Ahmad