

Dr. Uzma Ahmad (Tenured Associate Professor)

HEC Approved Supervisor

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Biography

Uzma Ahmad has received MSc and M. Phil degrees in Mathematics from University of the Punjab and PhD in Mathematics (Thesis titled ``The Power Digraphs in Number Theory'') from National University of Computer and Emerging Sciences (FAST). She has joined as a lecturer in Department of Mathematics at the University of the Punjab, Lahore in 2008 and is currently working as an Associate Professor. She has also served in National University of Computer and Emerging Sciences (FAST) as a visiting lecturer from 2003 to 2006. Her research interests include algebraic graph theory, molecular graph theory and fuzzy graph theory. She has published more than 45 research articles in international peer-reviewed journals. Some of her papers have been published in impact factor journals including Linear and Multilinear Algebra, Linear Algebra and its applications, Kuwait Journal of science, Mathematical Biosciences and Engineering, Computational and Applied Mathematics, Journal of Intelligent and Fuzzy Systems, Czechoslovak Mathematical journal, Bulletin of Iranian Mathematical Society and Utilitas Mathematica, Ars Combinatoria, Open Chemistry and Communications in algebra. Her total impact factor is 50. She has received the departmental best teacher award by the Department of Mathematics, University of the Punjab in 2014. She has presented her research work in 20 International/ national conferences related to her field. She has supervised 3 PhD theses and 21 M.Phil Thesis. She is also serving as a Reviewer/Referee for different International Journals. She has also worked as the students advisor in Department of Mathematics, University of the Punjab.

Academic Qualifications

- PhD, National University of Computer and Emerging Sciences(FAST), Lahore Campus.
 - Area of research: Graph Theory, 2013
- M-Phil (Mathematics), University of the Punjab in 2004.
 - Area of Research: Coding Theory.
- Msc. (Mathematics), University of the Punjab in 2001.
- BSc (Double Maths and Physics), Govt. College for Women, Gujranwala, Pakistan in 1999
- F.Sc, Govt. College for Women, Gujranwala, Pakistan in 1997.

Department of Mathematics, University of the Punjab, New Campus, Lahore

- Matriculation (Science), Pakistan foundation model high school, Gujranwala, Pakistan in 1995

Professional Experiences

- **August 25, 2020 to date:** Working as Associate Professor(Tenured) in the department of Mathematics, University of the Punjab.
- **May 2013 to August 24, 2020:** Working as an Assistant Professor in the department of Mathematics, University of the Punjab.
- **December 2008- May 2013:** Working as permanent lecturer in the department of Mathematics, University of the Punjab.
- **2003 -2006:** Working as lecturer (Visiting faculty) in National University of Computer and Emerging Sciences, Lahore Campus, Lahore.
- **2004:** working as visiting lecturer in IAS, University of the Punjab.
- **2013-2014:**Managerial Secretary, Punjab University Journal of Mathematics, Lahore, Pakistan
- **2014- 2019:**Member, Departmental Library Committee (DLC), Punjab University, Lahore
- **2014-2016:** Coordinator for departmental Seminar Series June 2014-June 2016
- **2020-date:** Member of departmental doctoral program committee, *DDPC*.
- **2020-date:** Member of Board of Studies in Mathematics.
- **2020-date:** Assistant Coordinator, MPhil/Ph.D. program, Department of Mathematics from September, 2019.
- **2017-date:** Member of Departmental Disciplinary Committee
- **2019-date:** Member of Departmental Examination Committee
- **2019-date:** Member of Departmental Scholarship Committee
- **2013-2022:** Students Advisor

Special Distinctions/Awards

- 3rd position (M-Phil) in Department of Mathematics, University of the Punjab
- 1st position (MSc) in Department of Mathematics, University of the Punjab .

Department of Mathematics, University of the Punjab, New Campus, Lahore

- UGC, Talent farming scholarship at MSc level.
- HEC Indigenous Scholarship for PhD.
- Best departmental teacher award 2013-2014

Teaching Experiences

- Applied Calculus
- Discrete Mathematics
- Probability and Statistics
- Linear Algebra
- Optimization Theory
- Group Theory
- Mathematical Statistics
- Rings and Vector Space
- Topology
- Functional Analysis
- Graph Theory
- Operations Research
- Advanced analysis
- Set Theory
- Measure Theory
- Advanced Group Theory

Research Interests

- Spectral Graph Theory
- Molecular Graph Theory
- Fuzzy Graph Theory

Research Experiences

- The research project on “The study of certain graph invariants on Nanotubes and Nanotori” funded by University of the Punjab 2017-2018

- The research project on “The digraphs arising by power maps of finite non-abelian groups” funded by University of the Punjab 2014-2015
- The research project on “ Power digraphs of Finite groups” funded by University of Punjab 2013-2014.
- PhD Thesis under the supervision of Prof. Dr. S.M. Husnine , University of computer and Emerging Sciences
- M-Phil Thesis under the supervision of Prof. Dr. Shoaib-ud -Din, University of the Punjab, Lahore

Conferences/ Workshops /Seminar

1. Talk delivered in Departmental Seminar Series (31) , Department of Mathematics, University of the Punjab, Lahore (November 18, 2020)
2. Invited speaker in National Workshop on Recent advances in Graph theory and Combinatorics 2019, held in Department of Mathematics, RIPHAH Institute of Computing and Applied Sciences, Lahore, December 14-15, 2019.
3. Paper presented in 38th meeting of the conference Colloquium on Combinatorics held at Paderborn University, November 8-9, 2019, Paderborn, Germany. (Travel grant approved by University of the Punjab, Pakistan)
4. Paper presented in 20th International Pure Mathematics Conference 2019 (20th IPMC 2019) on Algebra, Analysis and Geometry held in Islamabad from 23-25 August 2019 organized by Advanced Institute of Mathematical Sciences, Pakistan Mathematical Society and Allama Iqbal Open University Islamabad.
5. Paper presented in 5th UICPAM-2019 held at Centre For Mathematics and its Applications (CMAP) University of Management and Technology (UMT) (March 29-31, 2019)
6. Invited speaker in One Day Symposium on Algebra & Number Theory held in COMSATS, Lahore, October 13, 2018.
7. Paper presented in the conference COMBINATORICS 2018 being held in, Arco, Italy on June 03-09,2018. (Travel grant approved by Higher Education Commission, Pakistan)

8. Paper presented in 4th UICPAM-2018 held by Centre For Mathematics and its Applications (CMAP) University of Management and Technology (UMT) (March 31-April02, 2018)
9. Talk delivered in Seminar Series 2018, Department of Mathematics, University of the Punjab, Lahore (January 17, 2018)
10. Talk delivered in Seminar Series 2017, RIPHAH international University, Lahore Campus
11. Paper presented in 48th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida, USA, March 6-10, 2017 (Travel grant approved by Punjab Higher Education Commission, Pakistan)
12. Paper presented in 47th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida, USA, March 7-11, 2016, (Travel grant approved by Higher Education Commission, Pakistan)
13. Paper presented in 25th British Combinatorial Conference International Workshop on Discrete Structures 2015 held at Mathematics Institute of University of Warwick, Coventry, United Kingdom from July 6-10. (Travel grant approved by University of the Punjab, Lahore, Pakistan)
14. Workshop on modern aspect of algebra and graph theory held at department of Mathematics, CIIT, Lahore campus during March 27-28, 2015
15. Paper presented in International Workshop on discrete structures 2014, National University of Science and Technology(NUST), Islamabad.
16. CASM Workshop on Recent Advances in Commutative Algebra with Algebraic Geometry 2014, Lahore University of Management Sciences(LUMS), Lahore.
17. Paper presented in British combinatorial Conference 2013, Royal Holloway University of London, London. (Travel grant approved by University of the Punjab, Lahore, Pakistan)
18. 4th world conference on 21st century mathematics, Abdus salam school of Mathematical Sciences, GC University, Lahore.
19. Paper presented in 5th world conference on 21st century mathematics, Abdus salam school of Mathematical Sciences,GC University, Lahore.

20. Paper presented in Computational Complexities, Innovations and Solutions, TechnoMoot 2010, COMSATS Institute of Information Technology, Abbotabad.

Supervision of PhD/M.Phil Theses

PhD students

1. Ms. Saira Hameed (Title: Spectral and Topological Properties of Graphs, 2019)
2. Miss Saba Siddique (Title: Connectivity Of Specific Fuzzy Graphs, 2022)
3. Mr. Muhammad Ibraheem (Title: Analysis of Topological Indices and Coindices for Resultant Graphs) (Co-Supervisor)
4. Ayesha Khan (Ph.D in progress)
5. Tahira Batool(Ph.D in progress)
6. Sadia Akhtar (Ph.D in progress)
7. Iqra (Ph.D in progress)

M. Phil Thesis Supervised

1. Miss Muqadas Moeen (Title: Analysis and Characterization of finite groups by means of iteration digraphs, 2014-2015)
2. Miss Rabia Yousaf (Title: The study of topological indices of molecular graphs by using group theoretical methods, 2015-2016)
3. Miss Qanitah Ama -Tul- Mughani (Title: The Symmetry of V-Phenylenic Nanotubes and Modified Schultz Index for Certain Subdivision Operators, 2016-2017)
4. Mr Ahsan Bilal, (Title: On Extremal Graphs with respect to Certain Topological Indices, 2016-2017)
5. Miss Shaista Jabeen, (Title: Anti-Reciprocal Eigenvalue Properties of Weighted Graphs, 2017-2018)
6. Miss Misbah Arooj, (Title:Characterization of Finite Groups using Power Graphs, 2017-2018)
7. Miss Sara Ahmed (Title: Mixed Metric Generator of Graphs, 2018-2019)
8. Miss Faiza Saeed (Title: Spectra of Signed Cycle Graphs, 2018-2019)

9. Miss Memona Bebi (Title: Enhanced Power Graphs of finite Groups having unique Dominating vertex, 2018-2019)
10. Miss Tehreem Fatima (Title: Mixed Metric Dimension for Product of Graphs, 2018-2019)
11. Miss Javeria Hanif (Title: Upper Bounds Of Locating Total Dominating Set of Graphs, 2019-2020)
12. Miss Javeria Ibrahim (Title: On Lower Bounds Of Locating Total Dominating Set of Graphs, 2019-2020)
13. Miss Sadia (Title: Mixed Metric Dimension of Graphs, 2019-2020)
14. Miss Rukhsar (Title: Complex Pythagorean Fuzzy Threshold Graphs, 2020-2021)
15. Miss Afeefa Maryam (Title: Cubic Pythagorean Fuzzy Graphs, 2021-2022)
16. Miss Ayman Rasheed (Title: Cubic Planar Graphs, 2021-2022)
17. Miss Khadija Majeed (Title: Spectra Of Signed Graphs, 2021-2022)
18. Miss Zarash Batool (Title: Domination On Fuzzy Graphs, 2021-2022)
19. Mr. Imdad Hussain (Title: Wiener Energies Of Fuzzy Graphs, 2021-2022)
20. Mr. Nasir Kaleem Khan (Title: Randic and Harmonic Indices of Fuzzy Graphs, 2021-2022)
21. Mr. Muhammad Sabir (Title: Degree-Distance Indices Of Fuzzy Graphs, 2021-2022)

Evaluation of M.Phil/PhD Theses as External Examiner

1. Study of Temperature Indices of Hierarchical Hypercube Network and Optics Transpose Interconnection System Biswapped Network, (University of Lahore) 2023.
2. Topological analysis of the chemical structure of Heptacene, (University of Lahore) 2023.
3. Vertex Edge $V E(G)$ and Edge Vertex $E V(G)$ Degree Based Topological Indices of Some Molecular Structures, (University of Lahore) 2023.
4. Ph.D Thesis: Metric-Based Fractional Dimensions of Connected Graphs, (UMT, Lahore), 2023

5. Connection Topological Indices of Polycyclic Aromatic Hydrocarbon Structures, (UMT, Lahore), 2023.
6. Computing Bounds of Lanzhou Index for the Unicyclic Graph, (UMT, Lahore), 2023.
7. PhD Thesis: Fractional Metric Dimensions and Antimagic Valuations of Graphs, (UMT, Lahore), 2022
8. On Local Fractional Metric Dimension of Harary Graphs(UMT, Lahore), 2022.
9. Properties of Rook Polynomials in Two and Higher Dimensions Riphah Institute of Computing & Applied Sciences, Riphah International University Lahore) 2022
10. Some Results on Strong Product of Fuzzy Graph Structures With Application(UMT, Lahore) 2022
11. Fixed Points of Geraghty Type Quasi Contraction in Quasi Ordered Metric Spaces (UET, Lahore) 2021
12. Properties of Spectral Radius of some family of Graphs(Riphah Institute of Computing & Applied Sciences, Riphah International University Lahore) 2021
13. A few Applications of Graphs and their line graphs (Riphah Institute of Computing & Applied Sciences, Riphah International University Lahore) 2021
14. Fixed Point Results For Rational Type Contractions Using Ordered Structure(UET, Lahore) 2021
15. Connection Number Based Topological Indices Of Silicate And Oxide Networks (University of Management and Technology, Lahore Campus, Lahore) , 2021
16. Computing Local Fractional Metric Dimension of Prism Related Graphs (University of Management and Technology, Lahore Campus, Lahore), 2021
17. A Study of Topological Indices of Aramids, (National Textile University, Faisalabad), 2020
18. Viscous Dissipation Effects on MHD Boundary Layer of Sisko Fluid over a Non-Linear Stretching Sheet, (National Textile University, Faisalabad), 2020
19. Application of Hardy-Littlewood Maximal Operator on Networking and Utility Graphs, (National Textile University, Faisalabad), 2020
20. Modeling of the Comfort Properties of Woven Fabrics Using Genetic Algorithm (National Textile University, Faisalabad), 2020

21. Frequency Analysis of Fluid-filled Bi- Layered FGM Cylindrical Shells (National Textile University, Faisalabad), 2020
22. Frequency Analysis of Bi-layered FGM Cylindrical Shells based on Elastic Foundation in Boiler (National Textile University, Faisalabad), 2020
23. Anti-magic Labeling on a Class of Acyclic Graphs (University of Management and Technology, Lahore Campus), 2019
24. Topological Indices of Complete t-Partite Graphs with Applications in Neural Networks(University of Management and Technology, Lahore Campus), 2019
25. Second minimizing graph in the graphs whose complements are unicyclic(Second minimizing graph in the graphs whose complements are unicyclic, GC University, 2018)
26. Co-Irregularity of Different types of Graph Products(University of Management & Technology, Sialkot Campus), 2017
27. Co-Irregularity of Some Graph Operations(University of Management & Technology, Sialkot Campus), 2017

Publications

Year 2023

1. Iqra Nawaz and Uzma Ahmad, Certain Concepts in Directed Rough Fuzzy Graphs and its Application to Mergers of Companies, Fuzzy Information and Engineering (2023)
2. Uzma Ahmad, Muhammad Sabir, Multicriteria Decision Making based on the Degree and Distance Based Indices of Fuzzy Graphs, Granular Computing, 8, (2023), 793–807
<https://doi.org/10.1007/s41066-022-00354-x>
3. Ayesha Khan, Uzma Ahmad, Sundas Shahzadi, A new decision analysis based on 2-tuple linguistic q-rung picture fuzzy ITARA–VIKOR method, Soft Computing, (2023).
<https://doi.org/10.1007/s00500-023-08263-0>
4. Dalal Awadh Alrowaili , Uzma Ahmad, Saira Hameeed, Muhammad Javaid, Graphs with Mixed Metric Dimension three and Related Algorithms, AIMS Mathematics 8 (7), 16708-16723.
5. Uzma Ahmad, Iqra Nawaz, Said Broumi, Connectivity Index of Directed Rough Fuzzy Graphs and its Application in Traffic Flow Network, Granul. Comput. (2023).
<https://doi.org/10.1007/s41066-023-00384-z>

6. Sadia Akhter, Saira Hameed, and **Uzma Ahmad**, Signed graphs with strong anti-reciprocal eigenvalue property, *Communications in Algebra*, <https://doi.org/10.1080/00927872.2023.2204357>
7. Ayesha Khan, **Uzma Ahmad**, Adeel Farooq, Mohamed M. Ali Al-Shamiri, Combinative Distance based Assessment Method for Decision Making with 2-Tuple Linguistic q-Rung Picture Fuzzy Sets, *AIMS Mathematics*, 2023, Volume 8(6), 13830-13874. doi: 10.3934/math.2023708
8. **Uzma Ahmad**, Ayesha Khan and Arsham Borumand Saeid, Integrated multi-criteria group decision-making methods based on q-rung picture fuzzy sets, *Soft Comput* (2023). <https://doi.org/10.1007/s00500-023-08154-4>
9. **Uzma Ahmad**, Tahira Batool, Domination in rough fuzzy digraphs with application, *Soft Computing*, **27**(2023): 2425–2442. <https://doi.org/10.1007/s00500-022-07795-1>
10. **U. Ahmad**, M. Imran, A. M. Alanazi, R. Yousaf, and S. Hameed, On distance-based indices of regular dendrimers using automorphism group action, *Main Group Metal Chem.* 46 (1), 2023, pp. 20220028. <https://doi.org/10.1515/mgmc-2022-0028>
11. **Ahmad, U.**, Khan, N.K. & Saeid, A.B. Fuzzy topological indices with application to cybercrime problem. *Granul. Comput.* (2023). <https://doi.org/10.1007/s41066-023-00365-2>
12. **Uzma Ahmad**, Iqra Nawaz, Wiener Index of a Directed Rough Fuzzy Graph and Application to Human Trafficking, *Journal of Intelligent & Fuzzy Systems*, 2022, *Journal of Intelligent & Fuzzy Systems* 44 (2023) 1479–1495 DOI:10.3233/JIFS-221627
13. **Uzma Ahmad**, Saira Hameed, Sadia Akhtar, On weighted noncorona graphs with properties R and –SR, *Kuwait Journal of Science*, 50(2A), 2023: 1-12

Year 2022

14. **Uzma Ahmad**, Sadia Akhter, Saira Hameed, On Graphs With Anti-Reciprocal Eigenvalue Property, *Transactions On Combinatorics*, 2022, 10.22108/TOC.2022.135210.2015
15. Ayesha Khan, Muhammad Akram, **Uzma Ahmad** and Mohammed M. Ali Al-Shamiri, A new multi-objective optimization ratio analysis plus full multiplication form method for the selection of an appropriate mining method based on 2-tuple spherical fuzzy linguistic sets, *MBE*, 2022, 20(1): 456–488.

16. **Uzma Ahmad**, Iqra Nawaz, Directed rough fuzzy graph with application to trade networking, Computational and Applied Mathematics, 2022, 41:366 (pages 1-26)
<https://doi.org/10.1007/s40314-022-02073-0>
17. S. Hameed, **U. Ahmad**, Inverse of the adjacency matrices and strong anti-reciprocal eigenvalue property, Linear and Multilinear Algebra, 2022, 70(14), 2739-2764
18. **Uzma Ahmad**, Saieed Akbari, Saira Hameed, Mohammad Ali Nematollahi, Faiza Saeed, Addendum to "Spectral characterizations of signed cycles", Linear Algebra and its Applications, 2022, 651, 83-89.
19. Muhammad Akram, Ayesha Khan, **Uzma Ahmad**, Jos´e Carlos R. Alcantud and Mohammed M. Ali Al-Shamiri, A new group decision-making framework based on 2-tuple linguistic complex q -rung picture fuzzy sets, MBE, 2022, 19(11): 11281–11323, DOI: 10.3934/mbe.2022526
20. Saira Hameed , Ahmed Alamer , Muhammad Javaid and **Uzma Ahmad**, An estimation of HOMO-LUMO gap for a class of molecular graphs, Main Group Metal Chem. 2022, 45:100–105.
21. G. Muhiuddin, Saira Hameed, Ayman Rasheed and **Uzma Ahmad**, Cubic Planar Graphs with Application to Road Network, Journal: Mathematical Problems in Engineering, Volume 2022, Article ID 5251627, 12 pages
<https://doi.org/10.1155/2022/5251627>
22. **U. Ahmad**, S. Ahmed, Muhammad Javaid, M. N. Alam, Computing Fault-tolerant Metric Dimension of Connected Graphs, Journal of Mathematics, Volume 2022, Article ID 9773089, 6 pages <https://doi.org/10.1155/2022/97730892022>
23. G. Muhiuddin, Saira Hameed, Afeefa Maryam and **Uzma Ahmad**, Cubic Pythagorean Fuzzy Graphs, Journal of Mathematics, 2022, Volume 2022 , Article ID 1144666, <https://doi.org/10.1155/2022/1144666>
24. M. Akram, A. Khan, **U. Ahmad**, Extended MULTIMOORA method based on 2-tuple linguistic Pythagorean fuzzy sets for multi-attribute group decision-making, Granular Computing, 2022, Granular Computing <https://doi.org/10.1007/s41066-022-00330-5>
25. Muhammad Akram, **Uzma Ahmad**, Rukhsar, Faruk Karaaslan, Complex Pythagorean fuzzy threshold graphs with application in petroleum replenishment, Journal of Applied Mathematics and Computing, 2022, 68, 2125-2150

26. M. Javaid, M. Ibraheem, E. Bonyah, **U. Ahmad** and S. Wang, First General Zagreb Co-Index of Graphs under Operations, Journal of Mathematics, Volume 2022, Article ID 5094929, 11 pages, <https://doi.org/10.1155/2022/5094929>
27. M. Akram, **U. Ahmad**, Rukhsar and S. Samanta, Threshold Graphs Under Pythagorean Fuzzy Information, Journal of Multiple-Valued Logic and Soft Computing, 2022, 35(5-6), 547-574.
28. Muhammad Imran, Shehnaz Akhtar, **Uzma Ahmad**, Sarfraz Ahmad, Ahsan Bilal, On Extremal Graphs of Degree Distance Index by Using Edge-Grafting Transformations Method, Combinatorial Chemistry & High Throughput Screening, 2022, 25(3), 560 - 567 <https://doi.org/10.2174/1386207323666201224123643>
29. Muhammad Javaid, Muhammad Ibraheem, **Uzma Ahmad** and Jia-Bao Liu, Sharp Bounds of First Zagreb Coindex for -Sum Graphs, Journal of Mathematics, vol. 2021, Article ID 9984412, 19 pages, 2021. <https://doi.org/10.1155/2021/9984412>.
30. Muhammad Akram, **Uzma Ahmad**, Rukhsar, Threshold graphs under picture Dombi fuzzy information, Granular Computing, <https://doi.org/10.1007/s41066-021-00291-1>

Year 2021

31. Muhammad Akram, Saba Siddique and **Uzma Ahmad**, Mengers Theorem for m-Polar Fuzzy Graphs and Application of m-Polar Fuzzy Edges to Road Network, Journal of Intelligent & Fuzzy Systems, 2021, 41, 1553 – 1574.
32. Saba Siddique, **Uzma Ahmad** and Muhammad Akram, A Decision-Making Analysis with Generalized m-Polar Fuzzy Graphs, Journal of Multiple-Valued Logic and Soft Computing, 2021, 37, 409-436
33. Muhammad Javaid, Muhammad Ibraheem, **Uzma Ahmad** and Q. Zhu, Computing Bounds for Second Zagreb Coindex of Sum Graphs, Mathematical Problems in Engineering, Volume 2021, Article ID 4671105, 19 pages, <https://doi.org/10.1155/2021/4671105>
34. **U. Ahmad**, S. Hameed and S. Jabeen, Noncorona graphs with strong anti-reciprocal eigenvalue property, Linear and Multilinear Algebra, 2021,69(10), 1878-1888.
35. Saba Siddique, **Uzma Ahmad** and M. Akram, .A study on generalized graphs representations of complex neutrosophic information. J. Appl. Math. Comput., 2021, 65, 481–514

Year 2020

36. S. Siddique, **U. Ahmad**, W. Salam, M. Akram, F. Smarandache, Representation of Competitions by Complex Neutrosophic Information, *Journal of Intelligent & Fuzzy Systems*, 2020, 39, 7881–7897
37. J. Wei, **U. Ahmad**, S. Hameed and J. Hanif. Locating-Total Domination Number of Cacti Graphs, *Mathematical Problems in Engineering* Volume 2020, Article ID6197065, 10 pages, <https://doi.org/10.1155/2020/6197065>
38. **U. Ahmad**, S. Hameed and S. Jabeen, Class of weighted graphs with strong anti-reciprocal eigenvalue property, *Linear and Multilinear Algebra*, 2020, 68(6), 1129-1139.
39. **U. Ahmad**, M. Arooj, Combinatorial Properties of Power Graphs of Finite Groups of Prime Order Elements, *Communications in Algebra*, 2020, 48(2), 708-716.
40. S. Hameed, **Uzma Ahmad**, Extremal values in a class of basic peri-condensed benzenoids with respect to VDB topological indices, *Ars Combinatoria: A Canadian Journal of Combinatorics*, 2019, 145, 367-376.

Year 2019

41. S. Hameed, **U. Ahmad**, Minimal Energy Tree with 4 Branched Vertices, *Open Chemistry*, 2019, 17, 198-205
42. Jianzhong Xu, Jia-Bao Liu, Ahsan Bilal, **Uzma Ahmad**, Hafiz Muhammad Afzal Siddiqui, Bahadur Ali and Muhammad Reza Farahani, Distance Degree Index of Some Derived Graphs, *Mathematics* 2019, 7(3), 283; <https://doi.org/10.3390/math7030283>

Year 2018

43. **U. Ahmad** and S. Hameed, Bounds of HOMO-LUMO gap for certain nanotubes and nanotori, *Journal of Informatics and Mathematical Sciences*. 10(3) (2018), 391-398
44. **U. Ahmad** and S. M. Husnine, The Power Digraphs of finite groups, *Utilitas Math* 106 (2018), 319-339

Year 2017

45. U. Ahmad and M. Moeen, The digraphs arising by the power maps of generalized Quaternion groups, *Journal of algebra and its applications*, 16(9) 1750179 (2017) [12 pages], DOI: 10.1142/S0219498817501791

46. U. Ahmad, A. Sarfraz, R. Yousaf, Computation of Zagreb and Atom bond connectivity Indices of Certain Families of Dendrimers by using Automorphism Group Action, J. Serb. Chem.Soc. 82(2) (2017) , 151-162.

Year 2016

47. Yuhong Huo, Jia-Bao Liu, Sarfraz Ahmad, Nighat Farah ,Uzma Ahmad, Mohammad R. Farahani, Muhammad Imran, “On certain topological indices of TUC5C8 nanotubes” Journal of Computational and Theoretical Nanoscience,13 (2016), 9158-9161.
48. U. Ahmad and M. Moeen The classification of finite groups by using iteration digraphs, Czechoslovak Math. J, 66(4) (2016), pp. 1103-1117
49. U. Ahmad and S. M. Husnine, The Power Digraphs of Safe Primes, Bull. Iranian Math. Soc., 42(3) (2016), 749-759
50. S. Ahmad, U. Ahmad, M. Imran and N. Farah, The Omega and Sadhana polynomials of nanotube TUC4[p,q], Can. J. Chem. 94 (2016), 490–493

Years 2012- 2015

51. **U. Ahmad**, The Power Digraphs Associated with Generalized Dihedral Groups, Discrete Mathematics, Algorithms and its Applications, 7(4)(2015), 1550057(14 pages) DOI: 10.1142/S1793830915500573
52. **U. Ahmad** and S.Husnine, On the heights of Power Digraphs modulo n,Czechoslovak Math. J 62, 2 (2012), 541 - 566.
53. **U. Ahmad** and S. Husnine, Characterization of Power Digraphs modulo n, Coment. Math. Univ. Carolin 52, 3 (2011), 359 - 367.
54. S. Husnine, **U. Ahmad** and L. Somer, On Symmetries of Power Digraphs, Utilitas Mathematica 85 (2011), 257 - 271.

Reviewing Research Articles

- Linear and Multilinear Algebra
- Mathematical Reviews, American Mathematical Society
- Journal of Applied Mathematics and Computing.
- Journal of Algebra and its Applications
- Journal of Intelligent & Fuzzy Systems
- Iranian Journal of Fuzzy Systems

Department of Mathematics, University of the Punjab, New Campus, Lahore

- Open Chemistry
- Discrete Mathematics
- Main Group Metal chemistry