Dr. Imran Javaid

Director, CASPAM · Professor of Mathematics (Tenured)
Centre for Advanced Studies in Pure and Applied Mathematics (CASPAM)
Bahauddin Zakariya University, Multan, Pakistan

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PROFILE

Dr. Imran Javaid is a tenured Professor of Mathematics at the Centre for Advanced Studies in Pure and Applied Mathematics (CASPAM), Bahauddin Zakariya University, Multan, where he is serving his second term as Director, having first led the Centre from 2019 to 2022. He earned his PhD from the Abdus Salam School of Mathematical Sciences, GC University Lahore (2007), and joined BZU in 2008.

His research began in metric and resolvability parameters of graphs — metric dimension, partition dimension, fault tolerance, fixing and distinguishing numbers — and grew into a body of work on rough sets, information granulation and attribute reduction in graphs and information systems. Recent papers in Information Sciences, Applied Soft Computing and the Journal of Applied Mathematics and Computing bring these ideas to pattern recognition, social-network dynamics and explainable decision support.

ACADEMIC APPOINTMENTS

Current	**Director (second term)**, CASPAM, Bahauddin Zakariya University
2019 – present	**Professor (Tenured)**, CASPAM, Bahauddin Zakariya University
2019 – 2022	**Director (first term)**, CASPAM, Bahauddin Zakariya University
2015 – 2019	**Associate Professor (Tenured)**, CASPAM, Bahauddin Zakariya University
2014 – 2015	**Assistant Professor (Tenured)**, CASPAM, Bahauddin Zakariya University
2008 – 2014	**Assistant Professor (Tenure Track)**, CASPAM, Bahauddin Zakariya University
2018	**Visiting Lecturer, Mevlana Staff Exchange**, Abant İzzet Baysal University, Bolu, Türkiye

EDUCATION

2003 – 2007	**PhD, Mathematics**, Abdus Salam School of Mathematical Sciences, GC University Lahore

2000 – 2002	**MSc Mathematics (First Division)**, University of the Punjab, Lahore
1997 – 2000	**BSc Physics & Mathematics (First Division)**, Bahauddin Zakariya University, Multan

RESEARCH INTERESTS

Graph & Network Theory, Rough Sets & Granular Computing, AI, Machine Learning & Decision Science, Quantitative Finance & Business Analytics.

AWARDS AND HONOURS

2010 · 2011 · 2012	**Research Productivity Award**, Pakistan Council for Science and Technology (three consecutive years)
2012 – 2015	**Performance-Based Pay Increment**, BZU — awarded four consecutive years for five or more publications per year
PhD years	**Second Prize, Young Speakers**, Third World Conference on 21st Century Mathematics, ASSMS, GCU Lahore

RESEARCH GRANTS

2018	**Controllability in Graphs Using Node-Distinguishing Parameters**, Higher Education Commission (HEC), Pakistan (PKR 1.245 m)

JOURNAL PUBLICATIONS (69)

Impact Factor Bearing Journals (58)

1. H. Arshad, **I. Javaid**. Metric-based granular computing in networks. *Applied Soft Computing, 202, Part C (October 2026), 115965.* doi:10.1016/j.asoc.2026.115965
2. A. Fatima, **I. Javaid**, M. Akram. Rough Set Theory Applied to Group of Symmetries for Pattern Recognition. *New Mathematics and Natural Computation, (2025), 1–20.*
3. **I. Javaid**, A. Fatima, M. Akram. Symmetry-based granulation in networks associated with commutative rings: application in social network dynamics. *Journal of Applied Mathematics and Computing, (2025), 1–26.*
4. R. Alharbi, H. Arshad, **I. Javaid**, A. N. A. Koam, A. Haider. Distance-based granular computing in networks modeled by intersection graphs. *AIMS Mathematics, 10(5), (2025), 10528–10553.*

5. H. Arshad, **I. Javaid**, A. Fahad. Granular computing in zero-divisor graphs of Z_n. *Kuwait Journal of Science, 51(3), (2024), 100231.*
6. A. Fatima, **I. Javaid**. Rough set theory applied to finite dimensional vector spaces. *Information Sciences 659 (2024) 120072.*
7. M. N. Azhar, M. Fazil, **I. Javaid**, M. Murtaza. Graphs with distinguishing sets of size k. *Kuwait Journal of Science 51 (2024) 100170.*
8. **I. Javaid**, H. Benish, M. Murtaza. The fractional local metric dimension of graphs. *Contributions to Discrete Mathematics, 19(3) (2024), 163–177.*
9. **I. Javaid**, A. Haider, M. Salman, S. Mehtab. Resolvability in hypergraphs. *Contributions to Discrete Mathematics, 18 (2) (2023), 176–187.*
10. A. Shah, **I. Javaid**, S. Ur. Rehman. Symmetries and Symmetry-Breaking in arithmetic graphs. *Heliyon 9 (2023) e19820.*
11. S. Ur. Rehman, M. Imran, **I. Javaid**. On automorphism and fixing number of co-normal product of graphs. *Indian J Pure Appl Math (2023)*. doi:10.1007/s13226-023-00421-2
12. W. Wang, H. Arshad, A. Fahad, **I. Javaid**. On some Ev and Ve degree dependent indices of Benes network and its derived classes. *Computer Modeling in Engineering & Sciences, 135(2), 2023, 1685–1699.*
13. **I. Javaid**, S. Ali, S. Ur Rehman, A. Shah. Rough sets in graphs using similarity relations. *AIMS Mathematics, 7(4) 2022, 5790–5807.*
14. M. Fazil, **I. Javaid**, M. Murtaza. On the fixing number of functigraphs. *Bulletin of the Korean Mathematical Society, 58(1) 2021, 171–181.*
15. M. Fazil, **I. Javaid**. On the fixatic number of graphs. *Ars Combinatoria, 153(2020), 41–52.*
16. M. Murtaza, **I. Javaid**, M. Fazil. Covering codes of a graph associated to a finite vector space. *Ukrains' kyi Matemattychnyi Zhurnal, 72(7) 2020, 952–959.*
17. S. Rehman, M. Imran, **I. Javaid**. On the metric dimension of arithmetic graph of a composite number. *Symmetry, 2020.*
18. M. Murtaza, M. Fazil, **I. Javaid**. Locating-dominating sets of functigraphs. *Theoretical Computer Science, 799(2019), 115–123.*
19. H. Benish, **I. Javaid**, M. Murtaza. Automorphism related parameters of graph associated to a finite vector space. *Utilitas Mathematica, 111(2019),35–48.*
20. S. Akhter, M. Imran, M. R. Farahani, **I. Javaid**. On topological properties of hexagonal and silicate networks. *Hacettepe Journal of Mathematics and Statistics, 48(3) 2019, 711–723.*
21. **I. Javaid**, M. Salman, M. Murtaza, F. Iftikhar, M. Imran. Weak total resolving sets in graphs. *Utilitas Mathematica, 110(2019), 11–26.*
22. **I. Javaid**, H. Benish, M. Imran, A. Khan, Z. Ullah. On some bounds of the topological indices of generalized Sierpiński and extended Sierpiński graphs. *Journal of Inequalities and Applications, (2019) 2019:37.* doi:10.1186/s13660-019-1990-1

23. **I. Javaid**, M. S. Aasi, I. Irshad, M. Salman. On fixing sets of composition and corona product of graphs. *Utilitas Mathematica, 109(2018), 17–28.*
24. M. Salman, **I. Javaid**, M. A. Chaudhry. Resolving share and topological index. *Utilitas Mathematica, 108(2018), 89–105.*
25. M. Fazil, M. Murtaza, Z. Ullah, U. Ali, **I. Javaid**. On the Distinguishing Number of Functigraphs. *Symmetry, 2018, 10, 332.* doi:10.3390/sym10080332
26. **I. Javaid**, S. Rehman, M. Imran. Bounds on the domination number and the metric dimension of co-normal product of graphs. *Journal of Inequalities and Applications (2018) 2018:162.* doi:10.1186/s13660-018-1752-5
27. M. Salman, **I. Javaid**, M. A. Chaudhry. Minimum Fault-Tolerant, local and strong metric dimension of graphs. *Ars Combinatoria 138 (2018), 333–353.*
28. M. N. Azhar, **I. Javaid**. Metric Basis in Circulant Networks. *Ars Combinatoria 136 (2018), 277–286.*
29. **I. Javaid**, M. Murtaza, M. Asif, F. Iftikhar. On the fixed number of graph. *Bulletin of Iranian Mathematical Society, 43(7)(2017)2281–2292.*
30. A. Younus, **I. Javaid**, A. Zohra. On Controllability and Observability of Fractional Continuous-Time Linear Systems with Regular Pencils. *Bulletin of the Polish Academy of Sciences Technical Sciences, 3(65)(2017), 297–304.*
31. M. Fazil, **I. Javaid**, M. Salman, U. Ali. Locating-dominating sets in hypergraphs. *Periodica Mathematica Hungarica, 72(2016) , 224–234.*
32. M. Imran, M. Salman, M. Rehmat, **I. Javaid**. The crossing number of chordal ring networks. *Periodica Mathematica Hungarica, 2(71) (2015) 193–209.*
33. K. Ali, I. Tomescu, **I. Javaid**. On path-sunflower Ramsey numbers. *Mathematical Reports 17(67), 4(2015) 385–390.*
34. U. Ali, F. Azam, **I. Javaid**, A. Haider. Braids with Trivial Simple Centralizer. *Algebra Colloquium 22 : 4 (2015) 561–566.*
35. **I. Javaid**, F. Khalid, A. Ahmad, M. Imran. On a weaker version of sum labeling of graphs. *Mathematical Reports, 16(66), 3(2014), 413–420.*
36. **I. Javaid**, M. Salman, M. A. Chaudhry. Graphs of order n with fault-tolerant partition dimension n−1. *U. P. B. Sci. Bull. Uni. Series A, 3(76)(2014), 159–168.*
37. **I. Javaid**, H. Benish, A. Haider, M. Salman. Determining and distinguishing number of hypergraphs. *U. P. B. Sci. Bull. Uni. Series A, 2(76)(2014), 75–84.*
38. H. U. Afzal, A. Q. Baig, M. Imran, **I. Javaid**. Super edge-magic labeling of volvox and pancyclic graphs. *Util. Math. 93 (2014), 49–56.*
39. S. Naz, M. Salman, U. Ali, **I. Javaid**, S. Ihtsham-ul-Haq Bukhary. On the Constant Metric Dimension of Generalized Petersen Graphs P(n,4). *Acta Math. Sin. (Engl. Ser.) 7(30)(2014), 1145–1160.*

40. Z. Ullah, **I. Javaid**, M. A. Chaudhry. On generalized triple derivations on lattices. *Ars Combin. 113 (2014), 463–471.*
41. **I. Javaid**, A. Ismail, M. Salman, A. Ahmad, Slamin. Labeling of Chordal Rings. *Utilitas Mathematica, 90(2013), 61–75.*
42. A. Rauf, M. A. Chaudhry, **I. Javaid**. Derivations on semiprime Γ-rings. *Utilitas Mathematica, 90(2013), 171–185.*
43. Z. Ullah, **I. Javaid**, M. A. Chaudhry. Derivations involving centralizers. *Utilitas Mathematica, 90(2013), 383–392.*
44. M. Salman, M. A. Chaudhry, **I. Javaid**. On the locatic number of graphs. *International Journal of Computer Mathematics, 5(90)(2013), 912–920.*
45. S. Ahmad, **I. Javaid**, M. A. Chaudhry, M. Salman. On the metric dimension of generalized Petersen graphs. *Quaestiones Mathematicae, 36(2013), 421–435.*
46. M. Imran, A. Q. Baig, S. A. Bokhary, **I. Javaid**. On the metric dimension of circulant graphs. *Applied Mathematics Letters 25(2012) 320–325.*
47. A. Q. Baig, M. Imran, **I. Javaid**, Andrea Semanicova-Fenovcikova. Super edge-magic deficiency of graphs. *Utilitas Mathematica 87(2012), 355–365.*
48. **I. Javaid**, S. Ahmad, M. N. Azhar. On the Metric Dimension of Generalized Petersen Graphs. *Ars Combinatoria 105(2012) 171–182.*
49. M. A. Chaudhry, A. Rauf, **I. Javaid**. On (α,β)-generalized derivations on lattices. *Ars Combinatoria 105(2012) 525–533.*
50. M. Salman, **I. Javaid**, M. A. Chaudhry. Resolvability in circulant graphs. *Acta Mathematica English Series 9(28) (2012) 1851–1864.*
51. M. Salman, **I. Javaid**, M. A. Chaudhry. 2-size resolvability in graphs. *Appl. Math. Inform. Sci. 6(2)(2012), 371–376.*
52. A. Ahmad, **I. Javaid**, M. F. Nadeem. Further results on super edge magic deficiency of unicyclic graphs. *Ars Combinatoria 99(2011), 129–138.*
53. M. T. Rahim, K. Ali, **I. Javaid**. On antimagic total labelings of some families of graphs. *Ars Combinatoria 95(2010), 225–234.*
54. M. A. Chaudhry, **I. Javaid**, M. Salman. Fault-tolerant metric and partition dimension of graphs. *Utilitas Mathematica 83 (2010), 187–199.*
55. **I. Javaid**, M. Salman, M. A. Chaudhry, S. Shokat. Fault-Tolerance in Resolvability. *Utilitas Mathematica 80(2009) 263–275.*
56. **I. Javaid**, M. T. Rahim, K. Ali. Families of regular graphs with constant metric dimension. *Utilitas Mathematica 75 (2008), 21–33.*
57. I. Tomescu, **I. Javaid**. On the metric dimension of Jahangir graph. *Bulletin Mathematique de la Societe des Sciences Mathematiques de Romanie 50(2007) 371–376.*

58. I. Tomescu, **I. Javaid**, Slamin. On the partition dimension and connected partition dimension of wheels. *Ars Combinatoria 84 (2007), 311–317.*

ISI Listed Journals (5)

1. S. A. U. H. Bokhary, M. Imran, **I. Javaid**. On vertex irregularity strength of rotationally symmetric polytopes. *Science International Lahore 24(3)(2012), 251–256.*
2. A. Rauf, **I. Javaid**, M. A. Chaudhry. Permuting Tri-Derivations on Incline Algebras. *World Applied Science Journal,19(11)(2012), 1649–1652.*
3. **I. Javaid**, N. K. Raja, M. Salman, M. N. Azhar. The Partition Dimension of Circulant Graphs. *World Applied Science Journal, 18(12)(2012), 1705–1717.*
4. **I. Javaid**, M. N. Azhar, M. Salman. Metric Dimension and Determining Number of Cayley Graphs. *World Applied Science Journal,18(12)(2012), 1800–1812.*
5. **I. Javaid**, F. Iftikhar, M. Salman. Total resolvability in graphs. *Middle East Journal of Scientific Research, 11 (12)(2012), 1649–1658.*

International Journals (3)

1. A. R. Khan, M. A. Chaudhry, **I. Javaid**. Some results on prime and semiprime Γ-rings. *Analele Universităţii Oradea Fasc. Matematica, Tom XXIII (2016), Issue No. 1, 177–187.*
2. A. Ahmad, K. M. Awan, **I. Javaid**, Slamin. Total vertex irregularity strength of wheel related graphs. *Austr. Journal of Combinatorics, 51(2011) 147–156.*
3. A. Ahmad, M. F. Nadeem, **I. Javaid**, R. Hasni. On the super edge-magic deficiency of some families related to ladder graphs. *Austr. Journal of Combinatorics, 51(2011), 201–208.*

National Journals (3)

1. A. I. Pitafi, A. R. Khan, R. A. Memon, **I. Javaid**, M. S. Ullah. An Identity Related to Generalized Derivations on Semiprime Γ-Rings. *Sindh Univ. Res. Jour. (Sci. Ser.) 48 (4)(2016) 855–858.*
2. **I. Javaid**, S. Shokat. On the partition dimension of some wheel related graphs. *Journal of Prime Research in Mathematics, 4 (2008), 154–164.*
3. **I. Javaid**, M. Fazil, U. Ali, M. Salman. On some parameters related to fixing sets in graphs. *Journal of Prime Research in Mathematics, 14(2018), 1–12.*

PHD SUPERVISION (13)

Ongoing	**Ruby Jabbar**
Ongoing	**Hafiza Iqra Anum Yasin** — On discernibility matrices and discernibility functions of some graphs and data tables
Ongoing	**Hibba Arshad** — On some granular computing techniques in graphs and information systems associated to decision making

Submitted	**Abeer Fatima** — Information granulation and attribute reduction in some families of graphs and information tables
Submitted	**Aqsa Shah** — Graph theoretic distinguishability parameters and controllability of networks
2019	**Muhammad Murtaza** — Distinguishability parameter in graphs
2019	**Hira Benish** — Distinguishing graphs by distance, automorphisms and related parameters
2018	**Muhammad Naeem Azhar** — Distinguishing sets in graphs
2018	**Shahid ur Rehman** — Conditional resolving sets in graphs
2017	**Muhammad Fazil** — Determining sets and related parameters in graphs
2015	**Muhammad Salman** — Resolvability parameters in graphs
2015	**Abdul Rauf** — Derivations on Γ-rings and Lattice ordered rings
2015	**Muhammad Zafarullah** — Generalized derivations on rings and lattices

MPHIL SUPERVISION (83)

2026	**Sonia Ramzan** — Soft Computing Framework for Intelligent Portfolio Recommendation
2026	**Muhammad Naeem** — Dynamic Stock Market Forecasting for Position Trading using Graph Attention Network
2026	**Mariam Hussain** — Adaptive Multi-Agent Machine Learning Framework for Dynamic Customer Segmentation
2026	**Hafiza Sehrash Wazir** — An Information-Theoretic Framework for Firm Intelligence Using Entropy-Guided Recursive Partitioning
2026	**Muhammad Yasir** — Artificial Bee Colony Optimization for FMCG Supply Chains
2026	**Kawish Afzal** — Anomaly Detection in Financial Transactions using Graph Neural Networks
2025	**Farheen Qaiser** — Modeling And Simulating Supply Chain Disruptions Using GNN
2025	**Waleed Hassan** — Fundamental Analysis Based Stock Selection Using Rough Set Theory.
2025	**Salamat Ali** — Stock Selection for Mutual Funds using MCDM Techniques.
2024	**Kaneez Fatima** — Quantitative analysis of stock trading strategies
2024	**Mudassar Waheed** — Portfolio optimization using time series models
2024	**Aneeb Khalid** — Risk management with time series analysis
2024	**Shan Faisal** — Exploring marketing trends using advanced analytics

2024 **Shahzaib** — Optimizing pricing strategies using machine learning techniques

2023 **M. Shahbaz** — Trend forecasting using variants of rough sets

2023 **Umme Habiba** — Indiscernibility parameters in relational information systems and their usage in supply chain management

2023 **Masoom Zahra** — On some demand forecasting methods and decision support system for supply chain management

2022 **Kainat Fatima** — Granular computing in hypergraphs using distance

2022 **Mehwish Ali** — Rough set theory applied to hypergraphs using similarity relations

2022 **M. Umar** — Granular computing in power graphs

2022 **Fariha Gull** — Soft sets applied to non-zero component graphs

2020 **Abeer Fatima** — On decision making problems using regression and rough sets

2020 **Sidra Nisar** — On some relations between graphs and rough sets

2020 **Nida Zeenat** — On some decision making problems using multigranulation rough sets

2020 **Hibba Arshad** — On some attribute selection problems using variants of rough sets

2020 **Tooba Fatima** — On some attribute reduction techniques with applications

2020 **Shahroz Ali** — Approximation of some group related graphs and their controllability

2020 **Muhammad Amjad** — On some feature selection problems using set theoretic techniques

2019 **Nimra Akhtar** — Variants of metric dimension of some graphs of algebraic structures

2019 **Maria Shehzadi** — Controllability of some electrical circuit

2019 **Arooj Zahra** — Some uncertainty parameters associated to graphs

2019 **Maham Ramzan** — Controllability of some families of graphs

2019 **Amir Hussain** — Rough sets with some applications in decision making

2019 **Muhammad Zulqarnain** — Variants of rough sets with applications

2019 **Nuzhat Perveen** — Fractional domination in Cayley graphs

2018 **Ruby Jabbar** — The fixing number of zero divisor graph

2018 **Najam ul Sahar Sharif** — On domination related parameters in power graphs

2018 **Zoya Zulfiqar** — On location-domination of zero divisor graph

2018 **Sajida Azeem** — Symmetry and controllability in power graphs

2018 **Hafiza Iqra Anum Yasin** — Graph theoretic concepts and controllability in graphs

2018 **Nimra Anjum Lak** — Zero forcing set and related parameters in non-zero component graphs

2018 **Saman Younis** — On some metric dimension related parameters of intersection graph

2017 **Shehla Andleeb** — Dominating and locating dominating sets in some families of regular graphs

2017 **Muhammad Imran** — On resolvability and roughness in graphs associated to groups

2017 **Muhammad Kashif Farooq** — On some parameters related to uncertainty and resolvability in graphs

2017 **Hafiza Nayab Aisha** — On domination related parameters in graphs and fuzzy graphs

2017 **Syeda Ramsha Noor Sherazi** — Uncertainty parameters in graphs and groups

2017 **Abdul Majeed** — On some metric dimension related parameters in graphs

2017 **Mehnaz Gul** — Locating dominating sets of gear graphs

2017 **Shahid Hussain** — Total metric dimension of some families of graphs

2017 **Iqra Ahsan** — Locating dominating and locating total dominating sets of circulant graphs

2017 **Muhammad Azhar Baig** — Weak total metric dimension of some families of graphs

2017 **Sidra Siddiqui** — On the super edge-magic deficiency of Toeplitz graphs

2017 **Muhammad Abid Saleem** — Topological indices of linear polycene parallelogram benzenoid

2017 **Muhammad Fahad** — Some fixed point type iterative methods and polynomiography

2017 **Fazilat Shaheen** — Edge irregularity strength of circulant graphs

2016 **Aisha Anwar** — On some degree related topological indices of graphs

2016 **Iqra Irshad** — Controllability and distinguishability in graphs

2016 **Amna Khan** — On some distance and degree related parameters in graphs

2016 **Sara Rasheed** — On the locating-dominating sets in generalized Petersen graphs

2016 **Atif Mehmood** — t metric antidimension and the local metric dimension of some graphs

2016 **Ifra Bashir Sial** — On some topological indices related to distances in graphs

2016 **Saba Fatima** — On resolvability in graphs with weaker condition

2016 **Qurat ul Ain** — On locating sets in graphs with conditions

2015 **Muhammad Asif Shehzad** — Fault-tolerant metric dimension of some families of graphs

2015 **Maria Batool** — Zero forcing sets in graphs

2015 **Naila Mehreen** — Fixing sets in some graph products

2014 **Shahbaz Aasi** — Fixing sets of lexicographic product of graphs

2014 **Sadaf Khadim** — On conditional resolving sets in graphs

2013 **Farheen Iftikhar** — Total resolvability in graphs

2013 **Hira Benish** — Determining sets and distinguishing partitions in graphs and hypergraphs

2012 **Shahabuddin** — On the metric dimension and determining number of graphs

2012 **Nayab Khalid** — On the partition dimension of circulant graphs

2012 **Shahid ur Rehman** — On locatic partitions of graphs

2011 **Mezab Rehmat** — Crossing number of chordal rings

2011 **Sadaf Mehtab** — Resolvability in hypergraphs

2010 **Freeha Khalid** — Sum labeling of graphs

2010 **Shabbir Ahmad** — Resolvability in generalized Petersen graphs

2010 **Naeem Azhar** — On the determining and distance determining number of graphs

2009 **Sara Shokat** — Partition dimension of graphs

2009 **Abida Ismail** — Vertex magic and (a,d)- antimagic labeling of graphs

2009 **Kehkashan Nawaz** — Locating, dominating and locating-dominating sets in graphs

2009 **Muhammad Salman** — On the variations of metric dimension of graphs

INVITED TALKS AND PRESENTATIONS

2026 What is “Learning” in Machine Learning and Deep Learning?. 1st International Conference on Shaping the Sustainable Future through Mathematical Sciences (ICSSFMS-2026), Department of Mathematics, Government Sadiq College Women University, Bahawalpur, 7–8 May 2026 — Keynote

2026 Mathematical Modeling and Analytics for Sustainable and Data-Driven Business Decision Making. Namal Business Conference 2026, Namal University Mianwali, 3–4 April 2026 — Keynote

2024 Mathematical Modeling and Optimization of Business Operations. 2nd International Conference on Mathematics for a Sustainable Future (ICMSF-2024), The Women University Multan — Keynote

2024 Rough Set Theoretic Approach to Computation of Metric Dimension. International Seminar on Network and Molecular Topological Indices, Pingdingshan University, China (online) — Keynote · International

2024 Operations Research for Analysis and Optimization of Business Operations. Sadiq Women University, Bahawalpur — Invited

2023 Operations Research for Analysis and Optimization of Business Operations. 63rd National Seminar on Mathematics, Pakistan Mathematical Society (online) — Keynote · National

2021 Information System, Granular Computing and Decision Making. International Conference on the Impact of Mathematics in Modern Era, Islamia University Bahawalpur — Keynote

2020 Soft Rough Graphs. 5th International Conference in Pure and Applied Mathematics, University of Sargodha — Keynote

2019 Distinguishability Approaches in Graphs. Workshop on Graph Theory, Combinatorics and Applications (GTCA-2019), UAE University, Al Ain — Keynote · International

2018 Bloom's Taxonomy for Mathematics. University of Education, DG Khan Campus — Guest lecture · Faculty development

2018 Discrete Mathematics and Recent Research Trends in Graph Theory (lecture series). Abant İzzet Baysal University, Bolu, Türkiye — Mevlana Staff Exchange — Guest lecture series · International

2017 Some Recent Advances in the Resolvability in Graphs. International Conference on Mathematics and its Applications, GC University Lahore — Keynote

2017 Distinguishability Approaches and Associated Parameters in Graphs. 3rd International Conference in Pure and Applied Mathematics, University of Sargodha — Keynote

2016 The Fractional Fixing Number of Graphs. Workshop on Modern Aspects of Algebra and Graph Theory, COMSATS Lahore — Invited

2015 Variations of Metric Dimension of Graphs. Workshop on Modern Aspects of Algebra and Graph Theory, COMSATS Lahore — Invited

2013 Metric Dimension and Determining Number of Hypergraphs. National Workshop on Recent Advances in Graph Theory and Combinatorics, CASM, LUMS — Invited

2012 Metric Dimension and Related Parameters. Spring Workshop on Recent Advances in Graph Theory and Combinatorics, CASM, LUMS — Invited

2007 — On the Connected Partition Dimension of Unicyclic Graphs. International Conference on Graph Theory and Information Security, Institut Teknologi Bandung, Indonesia — Contributed paper · International

ORGANISED

2025 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-9). CASPAM, BZU Multan, 20 February 2025

2023 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-8). CASPAM, BZU Multan, 14 December 2023

2022 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-7). Jinnah Auditorium, BZU Multan, 31 March 2022

2019 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-6). CASPAM, BZU Multan, March 2019

2018 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-5). CASPAM, BZU Multan, April 2018

2017 — **Organising Secretary**, CASPAM International Conference on Mathematics and Applications. CASPAM, BZU Multan, 6–7 November 2017

2017 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-4). CASPAM, BZU Multan, April 2017

2016 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-3). CASPAM, BZU Multan, May 2016

2015 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-2). CASPAM, BZU Multan, March–April 2015

2014 — **Member, Organising Committee**, CASPAM Regional Student Olympiad of Mathematics (CRSOM-1). CASPAM, BZU Multan, March 2014

ADMINISTRATIVE POSITIONS

Current · 2019 – 2022 — **Director, CASPAM**

2009 – 2020 — **In-charge, CASPAM Research Laboratory**

2019 – 2020 — **Focal Person, Pakistan Citizen Portal**

2009 – 2014 — **Coordinator, MSc (Evening)**

University	**Chairman, Digitalization Committee**
University	**Convener, TTS Grievance Redressal Committee**
University	**Chairman, House Allotment Committee**

BOARDS AND COMMITTEES

- University of Narowal — Steering Committee
- COMSATS University Islamabad — Board of Studies
- Islamia University Bahawalpur — Board of Studies
- Sadiq Women University — Board of Studies; Advanced Studies & Research Board
- GC University Faisalabad — Board of Studies; Tenure Review
- University of Gujrat — Departmental Tenure Review
- Ghazi University DG Khan — Board of Studies
- Emerson University Multan — Board of Studies
- KFUEIT Rahim Yar Khan — Board of Studies
- Multan Flying Club — BSc Aviation Sciences Board of Studies
- BZU — Board of Studies, Affiliation, Semester Reforms, TTS Standing, Admissions and Examination committees

EXTERNAL EXAMINER

NUST Islamabad, University of the Punjab, GC University Lahore, GC University Faisalabad, COMSATS, University of Sargodha, Islamia University Bahawalpur.

COURSES TAUGHT

Foundations and Applications of Generative AI, Deep Learning, Business Intelligence, Actuarial Mathematics, Operations Research, Business Analytics, Optimization Theory, Mathematical Foundations of Finance, Data Analysis using Excel, Machine Learning, Artificial Intelligence, Database Systems, Discrete Structures, Probability & Mathematical Statistics, Linear Algebra & Matrix Computation, Real & Complex Analysis, Control Theory, Combinatorics & Graph Theory, Algebraic Graph Theory, Fuzzy Graphs & Hypergraphs, Differential Equations, Group Theory & Algebra, Calculus I–III.

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REFERENCES

Available on request.

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