

Prof. Dr. Khurram Shabbir

Chairperson, Pakistan IMU Committee · Interim President, National Mathematical Society of Pakistan · Convener (2024), HEC National Curriculum Review Committee for Mathematics

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PROFILE

Tenured Professor of Mathematics at Government College University Lahore, on its faculty since 2008. Since October 2026, Chairperson of the Pakistan IMU Committee and Interim President of the National Mathematical Society of Pakistan, the country's Adhering Organization to the International Mathematical Union. Elected Convener of HEC's National Curriculum Review Committee for Mathematics in October 2024, and since August 2026 a member of HEC's Education Testing Council committee for mathematics.

Head of the Abdus Salam School of Mathematical Sciences since May 2025, with five faculty and about 70 MPhil and PhD scholars. Of the 45 PhD cases pending at takeover, cleared 14 through defence in the first year, with more than 20 further theses under evaluation; in 2025–26 the School held 29 thesis defences in all and recorded more than 55 publications. Restored HEC recognition of the MPhil and PhD programmes under the Graduate Education Policy 2023 and introduced a contractual faculty policy and a merit-based PhD admission policy. In 2025, negotiated the resumption of Pakistan's IMU membership and convened AS-ICMSET 2025, which drew more than 500 participants, including the Presidents of the IMU and the EMS.

Research spans singularity theory, mathematical physics, algebraic combinatorics, fixed point theory, fractional modelling and integral inequalities: 70 journal articles, an h-index of 15, 3 PhD graduates with two further theses submitted, and 37 MPhil graduates. Has sat on selection boards at eight universities and edited the *Journal of Prime Research in Mathematics* since 2014.

CAREER AT A GLANCE

Area	Record
National leadership	Chairperson, Pakistan IMU Committee, and Interim President, National Mathematical Society of Pakistan, since October 2026; Convener (2024), HEC National Curriculum Review Committee for Mathematics; Member, HEC Education Testing Council committee for Mathematics (three-year term from 2026)
Institutional leadership	Director General (In-Charge), Abdus Salam School of Mathematical Sciences, since May 2025: 5 faculty, about 70 MPhil and PhD scholars; 14 of 45 pending PhD cases defended in the first year; 29 thesis defences and 55+ publications in 2025–26
University service	18 years at GC University Lahore (since 2008); tenured Professor since February 2021
Journal articles	70 (HEC W: 40 · X: 18 · Y: 7 · other: 5), plus one book and one Springer book chapter
Cumulative impact factor	123.13 as reported (research articles only), pending verification against Journal Citation Reports
Citations and h-index	707 citations, h-index 15 (Google Scholar)
Doctoral supervision	3 PhD graduates; 2 theses submitted (2026); 2 in progress
MPhil and BS supervision	37 MPhil graduates; 38 BS (Hons) projects
Funded research as PI	HEC-NRPU Project 20-7359 (PKR 2.14 million); GCU-ORIC Project 421/ORIC/24

Area	Record
International funding	4 IMU-CDC Volunteer Lecturer grants (2025–2026); IMU and Simons Foundation travel grant to the 2026 IMU General Assembly

EDUCATION AND POSTDOCTORAL TRAINING

Qualification	Institution	Year	Notes
Postdoctoral Fellowship	Instituto de Matemáticas, Universidad Nacional Autónoma de México (UNAM), Mexico	Mar 2011 – Feb 2012	CONACYT–TWAS Postdoctoral Fellowship; host: Prof. José Seade
PhD Mathematics	Abdus Salam School of Mathematical Sciences, GC University Lahore	2008	Thesis: <i>Milnor Algebras and Brieskorn Modules of Homogeneous Polynomials</i> ; supervisor: Prof. Alexandru Dimca; HEC and Government of Punjab Indigenous PhD Scholarship (2004–2008)
MSc Mathematics	University of the Punjab, Lahore	2004	Second position in the University
BSc	Government Science College, Allama Iqbal Town, Lahore	2001	First position

LEADERSHIP AND ADMINISTRATIVE POSITIONS

Chairperson, Pakistan IMU Committee

National Mathematical Society of Pakistan, Pakistan's Adhering Organization to the International Mathematical Union • 5 October 2026 – present. Also Interim President of the Society from the same date.

- Negotiated the resumption of Pakistan's IMU membership in 2025.
- Represented Pakistan as delegate to the 20th IMU General Assembly, New York, July 2026, on a full IMU and Simons Foundation travel grant.
- Secured four IMU-CDC Volunteer Lecturer grants bringing visiting lecturers to Pakistan (2025–2026).

Convener, HEC National Curriculum Review Committee for Mathematics

Higher Education Commission, Academics Division • nominated by HEC letter No. HEC/CURR/NCRC:MATH/6684, 22 October 2024 • meeting at Bahauddin Zakariya University, Multan, 24–25 October 2024

- Nominated by HEC as a committee member and elected Convener by the members at the meeting.
- Led the national revision of the AD, BS and MS Mathematics curricula: eligibility criteria, programme and course learning outcomes, schemes of study and degree award requirements, in line with the HEC Undergraduate Education Policy V 1.1 and the Graduate Education Policy 2023.

Member, HEC Education Testing Council Committee for Mathematics

HEC Education Testing Council, Islamabad • Notification Ref. ETC-Notification/HEC/2026/52, 31 August 2026 • three-year term from the first meeting

- Designs and develops test items in mathematics for HEC's national testing.
- The committee's only Professor, alongside members from BUIEMS Quetta, Sukkur IBA University and Women University Mardan.

Director General (In-Charge), Abdus Salam School of Mathematical Sciences

GC University Lahore • 26 May 2025 – present • MP-I post; ASSMS is an autonomous institute with separate HEC funding, staff and building • 5 faculty, about 70 MPhil and PhD scholars

Took charge with 45 PhD cases pending. Cleared 14 of them through defence in the first year; more than 20 further theses have been submitted and are under evaluation. In 2025–26 the School held 29 thesis defences (14 PhD, 15 MPhil)

and recorded more than 55 publications. With five faculty, that is about six defences and eleven publications per faculty member in one year.

Indicator, FY 2025-26 (1 July 2025 – 30 June 2026)	Result
Thesis defences	29: 14 PhD, 15 MPhil
Publications by faculty and scholars	55+: 31 with faculty participation, 24 led by students and researchers
International mathematicians engaged	About 45
Lecture-equivalent sessions	90: 75 by internationally affiliated and 15 by national lecturers
Mini-courses	12, in pure, applied and computational mathematics
AS-ICMSET 2025 international conference	750+ registrations, 500+ participants, 18 international participants in person
NTICAGAIA-2025 international school	200+ applications, about 100 participants selected
IMM/Elsevier Youth Hackathon	30 undergraduate participants
Computing infrastructure	2-GPU AI and scientific computing facility in operation

Source: ASSMS Research Performance and International Engagement report, FY 2025-26, presented to the HEC Chairman on 7 October 2026.

- **Compliance and continuity:** resolved PhD supervision and continuity cases and restored compliance with the HEC Graduate Education Policy 2023, securing formal recognition of the MPhil and PhD programmes.
- **Policies adopted:** Abdus Salam Contractual Faculty Policy; revised, merit-based PhD Admission Policy.
- **Policies in the statutory approval pipeline:** International Faculty Engagement and Research Residency Framework; International Academic Payment and Engagement SOP for honoraria, reimbursements and foreign-currency remittances to visiting academics; ASSMS-LUMS-IMM Collaborative Academic Programme (pilot cohort 2026); National Research Seed Grant for Universities (NRSGU), a new initiative with a PKR 15 million pilot, alongside a National Mathematics Olympiad for talent from school to university.
- **Research quality:** stronger PhD publication standards, an independent graduate-review mechanism, revival of the Math Track, and a proposed International Advisory Board.
- **National plan presented to HEC:** six thematic research schools a year, a competitive international visitor and mobility window, and scale-up of the School's computing facility into a shared national AI and scientific computing facility for Pakistani universities.
- **Funding raised:** two IMU-CDC visitor grants, an HEC conference grant of PKR 500,000, and sponsorship from Sufi Group.
- **Events convened:** AS-ICMSET 2025 (24-26 November 2025), with a panel on the future of mathematical sciences in Pakistan; NTICAGAIA-2025 (18-21 November 2025) on computational algebraic geometry.
- **International engagement:** MOUs with Siirt University and Galatasaray University, Türkiye; working links with the IMU, EMS-CDC, IMM, LUMS, ICTP and CIMPA.

Managing Editor, *Journal of Prime Research in Mathematics*

ASSMS, GC University Lahore · Managing Editor 2014-2019 and 2020 – present; Editor 2019-2020

- Moved the journal's editorial workflow to Open Journal Systems (OJS).
- Prepared and submitted the journal's application for Web of Science indexing (2025).
- Oversees peer review, quality control and indexing compliance.

Other Academic Administration

Role	Unit	Period
Controller of Examinations	Department of Mathematics, GCU Lahore	2012 – present
In-Charge, MPhil Programme	Department of Mathematics, GCU Lahore	2018 – 2024
Elected Member, Academic Council (Associate Professor seat)	GCU Lahore	2017 – 2020
Conference Coordinator, International Conference on Mathematics and its Applications	GCU Lahore	2017 – 2018
Research Group Leader, Topology: Algebra and Geometry (TAG) seminar series	Department of Mathematics, GCU Lahore	2022
In-Charge of Seminars; Inter-departmental Sports Coordinator	Department of Mathematics, GCU Lahore	2008 – 2011

ACADEMIC APPOINTMENTS

Position	Institution	Period
Professor of Mathematics (Tenured)	Government College University Lahore	16 Feb 2021 – present
Visiting Researcher (online), Department of Industrial Engineering	Fenerbahçe University, Istanbul, Türkiye	Jun 2026 – present
Associate Professor of Mathematics	Government College University Lahore	25 May 2016 – 15 Feb 2021
Postdoctoral Fellow	Instituto de Matemáticas, UNAM, Mexico	Mar 2011 – Feb 2012
Assistant Professor of Mathematics	Government College University Lahore	21 May 2008 – 24 May 2016

Teaches graduate courses and supervises MPhil and PhD research; HEC-approved PhD supervisor since 2010.

UNIVERSITY GOVERNANCE AND STATUTORY BODIES

National and Inter-University Bodies

Role	Body	Date
Member, Board of Faculty, Faculty of Computing and Numerical Sciences	Government College Women University Faisalabad	Dec 2025
Member, Academic Council	Government College Women University Faisalabad	Oct 2025
Stakeholder and interview panel member, LAMSAMA accreditation of the Mathematics Study Program	UIN Walisongo Semarang, Indonesia	Jun 2025
Member, HEC committee for the GRE-equivalent MPhil/PhD admission test	Institute of Mathematics, University of the Punjab	2019 – present
Member, Committee of Courses	Allama Iqbal Open University, Islamabad	Feb 2025
External Expert, Board of Advanced Studies and Research (38th, 40th, 41st, 45th and 46th meetings)	University of Management and Technology, Lahore	2022 – 2024
Member, Academic Council	University of Narowal	Jan 2024
External Member, Quality Enhancement Cell and MPhil/PhD Admission Committee	Department of Mathematics, University of the Punjab	2022 – present

Selection Boards, Tenure Review and Boards of Studies

- **Expert Member, Selection Boards:** University of the Punjab; University of Agriculture Faisalabad; University of Gujrat (Main and Narowal campuses); University of Narowal; Government College Women University Sialkot; University of Okara; University of Education Lahore; University of Management and Technology Lahore.
- **Subject Expert**, selection for the post of Professor, University of Central Punjab, Lahore (Jan 2024).
- **External Evaluator**, promotion case to Professor, Forman Christian College (A Chartered University), Lahore (Apr 2024).
- **Member, Departmental Tenure Review Committees:** GC University Lahore; ASSMS; GC University Faisalabad; Government College Women University Sialkot; Fatima Jinnah Women University, Rawalpindi.
- **Member, Boards of Studies and Faculty:** ASSMS; GC University Lahore; GC University Faisalabad; University of the Punjab; Lahore College for Women University; University of Central Punjab; University of Education Lahore; University of Mianwali; Allama Iqbal Open University.

Committees Chaired at GC University Lahore

Committee	Date
Convener, Financial Aid Committee	Jan 2025
Convener, Probe Committee on financial and audit documentation, ASSMS	Oct 2024
Convener, Selection Committee for appointments in BS-01 to BS-16 (Second Statutes, GCU Ordinance 2002)	Oct 2024
Convener, inquiry committee on an MPhil admission case	Oct 2024
Convener, Technical Committee under PPRA rules	Sep 2024
Convener, Employee Loan Committee, Category A (BS-16 and above)	Sep 2024
Convener, Inspection Committee for unserviceable items, ASSMS	Jun 2024
Convener, Auction Committee for dead-stock disposal, ASSMS	Jun 2024
Convener, Probe Committee on vendor payments, ASSMS	Jun 2024
Convener, PEEDA Committee	Sep 2023

Committee Membership at GC University Lahore

- Committee on rationalisation of space at the Main Campus and the new Kala Shah Kaku campus (2025)
- Committee on rationalisation of visiting faculty appointments against departmental workload (2025)
- Grievance Redressal Committee, Chief Minister's Honhaar Undergraduate Scholarship Program (2024, 2025)
- University Discipline Committee under Section 12(1) of the First Statutes (2024)
- University Student Grievance Committee; University Grievance Committee for the PPRA profile (2024)
- Advisory Committee for Model Classrooms; Affiliation Committee for affiliated colleges (2024)
- Internal Member, Self Post-Graduate Program Review Panel 2023–24; DTRC, Department of Computer Science (2024)
- 19th Convocation Committee (2021); Admission Committee for international students (2019); MS/MPhil summer semester committee (2018); Kangaroo Mathematics Competition Investigation Committee (2017)
- ASSMS Admission Committee (2015); ASSMS Purchase Committee (2014–2016)
- Department of Mathematics: MPhil Selection Committee (since 2009); PhD Selection Interview Committee (since 2012); MSc Selection Committee (2014–2021)

RESEARCH GRANTS AND FUNDING

Research Projects as Principal Investigator

Project	Funder	Period	Funding	Status
<i>Extragradient Methods for Solving Fixed Point Problems</i> (Project 421/ORIC/24)	Office of Research, Innovation and Commercialization, GC University Lahore	Oct 2024 – Oct 2025	Institutional	Completed
<i>Open String Amplitudes and Elliptic Genera</i> (NRPU Project 20-7359), sole PI	Higher Education Commission, NRPU	2019 – 2021	PKR 2.14 million	Completed

Institutional and International Funding Secured

Year	Grant	Funder	Support
2026	Delegate of Pakistan, 20th IMU General Assembly, New York	IMU and Simons Foundation	Full travel and accommodation
2026	Volunteer Lecturer Program, Shabbir/Toledo/2026/VLP (ID 2605)	IMU Commission for Developing Countries	USD 2,700
2026	Volunteer Lecturer Program, Shabbir/Lopez/2026 (ID 2600)	IMU Commission for Developing Countries	USD 2,700
2026	Keynote and faculty seminars, International İbrahim Hakkı Congress	Siirt University, Türkiye	Accommodation and hospitality
2025	Volunteer Lecturer Program, Anderson, Arboleda/2025 (ID 2046)	IMU Commission for Developing Countries	USD 2,700
2025	Volunteer Lecturer Program, Cristhian Garay López/2025/VLP (ID 2023); final report submitted	IMU Commission for Developing Countries	USD 2,700
2025	Conference grant for AS-ICMSET 2025 (as Convener)	Higher Education Commission	PKR 500,000
2025	Conference sponsorship, AS-ICMSET 2025	Sufi Group	Corporate sponsorship
2023	Research visit, Arad, Romania	Research project, "Vasile Goldiş" Western University of Arad	Travel and accommodation

Fellowships, Scholarships and Travel Grants

Year	Award	Funder	Support
2015	Advanced School and Workshop on Geometry of Discrete Actions, Trieste	ICTP, Italy	Participation grant
2014	Travel grant for the CIMPA school in Istanbul	Clay Mathematics Institute, USA	USD 1,500
2006 – 2014	Grants for six CIMPA research schools: Madrid (2006); Lahore and Istanbul (2007); Hanoi (2013); Istanbul and Cuernavaca (2014)	CIMPA	Participation grants
2012	Academic visit to the University of Saskatchewan, Canada	UNAM	USD 2,000
2011 – 2012	Postdoctoral fellowship at UNAM	CONACYT, Mexico	USD 23,000
2011 – 2012	Postdoctoral fellowship at UNAM	TWAS, Italy	USD 3,000
2009 – 2010	Knot Theory school (2009) and Hodge Theory school (2010), Trieste	ICTP, Italy	Participation grants
2009	Invited lectures, Johannes Kepler University Linz and University of Vienna	Host universities	Lecture grants

Year	Award	Funder	Support
2004 – 2008	Indigenous PhD Scholarship	HEC and Government of Punjab	Full scholarship

INTERNATIONAL LINKAGES

Partner	Country	Engagement	Years
International Mathematical Union (IMU)	International	Negotiated resumption of Pakistan's membership (2025); national delegate to the 20th General Assembly (2026); four Volunteer Lecturer Program grants	2025 – 2026
European Mathematical Society; CIMPA; ICTP	International	Institutional engagement as head of ASSMS; ICTP alumnus since 2020; participant in ICTP and CIMPA schools since 2006	2006 – present
Siirt University	Türkiye	MOU with GCU (2025); keynote speaker, İbrahim Hakkı Congress (May 2026); scientific advisory committee, AICMME-2021	2021 – 2026
Galatasaray University	Türkiye	MOU with GCU	2025
Fenerbahçe University	Türkiye	Visiting Researcher (online), Department of Industrial Engineering (letter Ref. E-17315523-299-80783, 11 June 2026)	2026 – present
University of Sharjah	UAE	International Organizing Committee, Second Sharjah International Conference on Advanced Material (SICAM)	2026
"Vasile Goldiș" Western University of Arad	Romania	Resource person for the Erasmus+ MOU (Nov 2023); International Staff Week; invited talks at the Academic Days of Arad and the Workshop on Computer Security (May 2023); Diploma of Recognition (2022)	2022 – 2023
Indonesian Mathematical Society, Central Region	Indonesia	Coordinator, joint International Conference on Mathematics and Mathematics Education	Dec 2024
UIN Walisongo Semarang	Indonesia	LAMSAMA accreditation panel (2025); judge, International Walisongo Science Competition (2022); KBK Aljabar seminar series (2022); research collaboration (2023)	2022 – 2025
Universitas Gadjah Mada	Indonesia	Invited speaker, SEAMS–UGM Conference and Summer School on Number Theory and Cryptography; research collaboration	2023
UNAM; CIMAT; Cinvestav	Mexico	Postdoctoral fellowship at UNAM; conferences at CIMAT and Cinvestav	2011 – 2012
University of Saskatchewan; Mount Royal University	Canada	Academic and research visits	2012
Johannes Kepler University Linz; University of Vienna	Austria	Invited lectures	2009

RESEARCH PROFILE

Of the 70 journal articles, 46 have appeared since promotion to Professor in February 2021, including 11 in 2023. Work falls in eight areas:

- **Singularity theory and algebraic geometry:** Brieskorn modules, Milnor fibrations and toric modification (PhD and UNAM work); current doctoral work on flag varieties and homogeneous spaces.

- **Mathematical physics:** topological string amplitudes, the refined topological vertex and M-strings, in *Nuclear Physics B*, *JHEP* and *European Physical Journal C*; HEC-NRPU project on open string amplitudes.
- **Algebraic combinatorics:** posets, shuffle series and operads (*Journal of Algebraic Combinatorics*, 2025).
- **Fixed point theory and iterative methods:** convergence and stability of iterative schemes; GCU-ORIC project and Springer book chapter.
- **Fractional calculus and fluid modelling:** fractional models of non-Newtonian flow and heat transfer, including neural-network methods.
- **Integral inequalities:** Hermite–Hadamard and Jensen-type inequalities for convex and Godunova–Levin functions.
- **Graph theory:** radio numbers, metric dimension and topological indices with QSPR applications.
- **Commutative algebra:** regularity of elimination ideals and shellability.

PUBLICATIONS

Seventy journal articles, 46 of them since promotion to Professor in 2021, newest first. Each entry gives the HEC journal category and the journal impact factor (IF) as reported, pending verification against Journal Citation Reports.

Book and Book Chapter

- **K. Shabbir**, K. Ahmad, L. Guran. "Existence and Computational Approximation of Fixed Points of Generalized Multivalued Mappings in Banach Space." In M. Younis, L. Chen, D. Singh (eds), *Recent Developments in Fixed-Point Theory*, Industrial and Applied Mathematics, Springer, Singapore, 2024. doi:10.1007/978-981-99-9546-2_13
- **K. Shabbir**. *Milnor Algebras and Brieskorn Modules of Homogeneous Polynomials: Study of Torsion Classes in the Brieskorn Modules*. 2009.

Journal Articles

1. K. Ahmad, **K. Shabbir**, A. Saleem. "Topological Characterization of Diuretic Agents With QSPR-Based Regression Prediction." *Punjab University Journal of Mathematics* 58(5) (2026) 559–577. doi:10.52280/pujm.2026.58(05)01 · X · IF 1.0
2. I. Ullah, **K. Shabbir**. "Fiberwise Rossi extension domains for rank-one Matsuki orbits in complex Grassmannians." *Advances in Differential Equations and Control Processes* 33(3) (2026) 4619. doi:10.59400/adeqp4619 · X
3. H. Ahmad, H. Qawaqneh, W. Afzal, M. Abbas, **K. Shabbir**, M. Tariq, E. Hincal, W. M. Abdelfattah. "Improved Hermite–Hadamard, Fejér, and Jensen-Type Inequalities for Generalized Logarithmic Godunova–Levin Mappings via Erdélyi–Kober Fractional Operators." *International Journal of Analysis and Applications* 24 (2026) 262. doi:10.28924/2291-8639-24-2026-262 · X · IF 1.1
4. H. Ahmad, H. Qawaqneh, W. Afzal, **K. Shabbir**, M. Z. Meetei, M. Tariq, E. Hincal, M. A. El-Naggar. "Boundedness Properties of Multidimensional Fractional Hadamard-Type Operators on Campanato Spaces." *International Journal of Analysis and Applications* 24 (2026) 200. doi:10.28924/2291-8639-24-2026-200 · X · IF 1.1
5. Z. Hussain, **K. Shabbir**, K. Ahmad. "Computation for Lucky Number of Some Families of Planar Graphs." *Mathematica Universalis* 1(1) (2026) 26–45. · Non-HEC
6. M. B. Nasir, **K. Shabbir**. "Dihedral Isotropy in the Valentiner Action of A_6 on the Projective Plane." *JP Journal of Algebra, Number Theory and Applications* 65(4) (2026) 621–637. doi:10.17654/0972555526034 · X · IF 0.1
7. M. W. Ashraf, Z. Zheng, **K. Shabbir**, M. I. U. Rehman. "Numerical investigation of heat transfer in Williamson nanofluid flow with the Cattaneo–Christov double diffusion model using an artificial neural network approach." *Journal of Thermal Analysis and Calorimetry* (2026). doi:10.1007/s10973-026-15365-y · W · IF 3.1
8. Y. Almalki, W. Afzal, **K. Shabbir**, D. Breaz, L.-I. Coțrlă, A. Albaity. "New structural properties and Hermite–Hadamard inequalities for Godunova–Levin mappings via a novel analytical approach." *Research in Mathematics* 12(1) (2025) 2574096. doi:10.1080/27684830.2025.2574096 · X · IF 1.1
9. A. R. Virk, **K. Shabbir**, S. Barhoumi. "QSPR Analysis of Antiplatelet Agents and Dual Antiplatelet Therapy Using Labeled Based Topological Indices and Lagrange Interpolation Techniques." *Punjab University Journal of Mathematics* 57(4) (2025) 573–594. doi:10.52280/pujm.2025.57(04)04 · X · IF 1.0
10. K. Ahmad, **K. Shabbir**, K. Ahsan. "A Refined Inertial-like Subgradient Method for Split Equality Problems." *AppliedMath* 5(3) (2025) 117. doi:10.3390/appliedmath5030117 · X · IF 0.7
11. K. Ahmad, **K. Shabbir**, F. Ali, M.-F. Bota, L. Guran. "An Analytical Approach to Convergence, Stability, and Data Dependence of Jungck-KF Iterative Scheme with Applications in Dynamical Market Equilibrium." *Symmetry* 17(6) (2025) 885. doi:10.3390/sym17060885 · W · IF 2.2
12. A. A. Zafar, M. Shahzaib, **K. Shabbir**. "Advanced Hemodynamic Modeling of Pulsatile Blood Flow with Magnetic Nano-particles: Fractional Analysis for Optimizing Biomedical Applications." *Punjab University Journal of Mathematics* 57(1) (2025) 1–28. doi:10.52280/pujm.2025.57(01)01 · X · IF 1.0

13. K. Ahmad, E. R. Dolores-Cuenca, **K. Shabbir**. "Shuffle series." *Journal of Algebraic Combinatorics* 61(2) (2025) 1–40. doi:10.1007/s10801-025-01386-7 · W · IF 0.6
14. W. U. Hassan, **K. Shabbir**, A. Zeeshan, R. Ellahi. "Regression analysis for thermal transport of fractional-order magnetohydrodynamic Maxwell fluid flow under the influence of chemical reaction using integrated machine learning approach." *Chaos, Solitons & Fractals* 191 (2025) 115927. doi:10.1016/j.chaos.2024.115927 · W · IF 5.3
15. W. Afzal, M. Abbas, **K. Shabbir**. "Some new integral bounds for Godunova–Levin functions via fractional integral operators." *Open Journal of Mathematical Sciences* 8 (2024) 148–166. doi:10.30538/oms2024.0233 · Non-HEC
16. **K. Shabbir**, A. Raza, L. Guran. "Computation of Total Absolute Difference Edge Irregularity Strength of some Graph with n-pentagonal Pages and 3-regular Graph." *Scientific Inquiry and Review* 8(4) (2024) 80–92. doi:10.32350/sir.84.04 · Y
17. W. U. Hassan, **K. Shabbir**, M. I. Khan, L. Guran. "Computational Evaluation of Heat and Mass Transfer in Cylindrical Flow of Unsteady Fractional Maxwell Fluid Using Backpropagation Neural Networks and LMS." *Mathematics* 12(23) (2024) 3654. doi:10.3390/math12233654 · W · IF 2.3
18. J. Iqbal, **K. Shabbir**, L. Guran. "Stability and convergence computational analysis of a new semi analytical-numerical method for fractional order linear inhomogeneous integro-partial-differential equations." *Physica Scripta* 99(12) (2024) 125241. doi:10.1088/1402-4896/ad8d8f · W · IF 2.6
19. J. Iqbal, **K. Shabbir**, L. Guran, H. Emadifar. "A Novel Approach with Comparative Computational Simulation of Analytical Solutions of Fractional Order Volterra Type Integral Equations." *International Journal of Differential Equations* (2024) 8629461. doi:10.1155/2024/8629461 · X · IF 1.4
20. A. A. Zafar, S. Hussain, **K. Shabbir**. "Analysing MHD Heat-Mass Transfer model for Oldroyd-B Fluid Using Fractional Order Prabhakar Derivative." *Journal of Prime Research in Mathematics* 20(2) (2024) 10–29. Scopus-indexed · Y
21. A. A. Zafar, M. A. Sadiq, **K. Shabbir**, L. Guran. "A Computational Study of Vibrating System using the Constant Proportional Caputo Derivative Operator Approach." *International Journal of Modern Physics C* (2024) 2450231. doi:10.1142/S0129183124502310 · W · IF 1.89
22. K. Ahmad, **K. Shabbir**, N. Nazar. "Convergence Analysis of Picard Thakur Hybrid Iterative Scheme for α -Nonexpansive Mappings in Uniformly Convex Banach Spaces." *International Journal of Applied Mathematical Research* 13(1) (2024) 34–48. · Non-HEC
23. M. J. A. Junjua, **K. Shabbir**, A. Naseem. "Combinatorial Bounds of the Regularity of Elimination Ideals." *Ars Combinatoria* 156 (2023) 25–34. doi:10.61091/ars156-03 · Y · IF 0.265
24. A. Naseem, **K. Shabbir**, M. Ramzan. "Further Results on Radio Number of Wedge Sum of Graphs." *Ars Combinatoria* 156 (2023) 13–23. doi:10.61091/ars156-02 · Y · IF 0.265
25. M. Abbas, K. Ahmad, **K. Shabbir**. "Approximation of Fixed Point of Multivalued Mean Nonexpansive Mappings in CAT(0) Spaces." *Journal of Prime Research in Mathematics* 19(2) (2023) 1–16. Scopus-indexed · Y
26. **K. Shabbir**. "Milnor Fibrations and Regularity Conditions for Real Analytic Mappings." *Journal of Prime Research in Mathematics* 19(1) (2023) 82–91. Scopus-indexed · Y
27. J. Iqbal, **K. Shabbir**, A. Bucur, A. A. Zafar. "Analyzing the convergence of a semi-numerical-analytical scheme for non-linear fractional PDEs." *Alexandria Engineering Journal* 78 (2023) 26–34. doi:10.1016/j.aej.2023.06.095 · W · IF 6.8
28. M. K. Azam, S. E. Farooq, F. Ahmad, M. Iqbal, **K. Shabbir**, M. Aziz Rehman. "Applications of extended Hadamard K-fractional integral." *Italian Journal of Pure and Applied Mathematics* 49 (2023) 29–44. ESCI · Y
29. A. Waqar, **K. Shabbir**, M. Arshad, J. K. K. Asamoah, A. M. Galal. "Some Novel Estimates of Integral Inequalities for a Generalized Class of Harmonical Convex Mappings by Means of Center-Radius Order Relation." *Journal of Mathematics* (2023) 8865992. doi:10.1155/2023/8865992 · X · IF 1.555
30. L. Guran, **K. Shabbir**, K. Ahmad, M.-F. Bota. "Stability, Data Dependence, and Convergence Results with Computational Engendering of Fractals via Jungck–DK Iterative Scheme." *Fractal and Fractional* 7(6) (2023) 418. doi:10.3390/fractalfract7060418 · W · IF 3.577
31. L. Guran, K. Ahmad, **K. Shabbir**, M.-F. Bota. "Computational comparative analysis of fixed point approximations of generalized α -nonexpansive mappings in hyperbolic spaces." *AIMS Mathematics* 8(2) (2023) 2489–2507. doi:10.3934/math.2023129 · W · IF 2.739
32. W. Afzal, **K. Shabbir**, T. Botmart, S. Treanță. "Some new estimates of well known inequalities for (h_1, h_2) -Godunova–Levin functions by means of center-radius order relation." *AIMS Mathematics* 8(2) (2023) 3101–3119. doi:10.3934/math.2023160 · W · IF 2.739
33. W. Afzal, **K. Shabbir**, S. Treanță, K. Nonlaopon. "Jensen and Hermite–Hadamard type inclusions for harmonical h-Godunova–Levin functions." *AIMS Mathematics* 8(2) (2023) 3303–3321. doi:10.3934/math.2023170 · W · IF 2.739
34. T. Saeed, W. Afzal, **K. Shabbir**, S. Treanță, M. De la Sen. "Some Novel Estimates of Hermite–Hadamard and Jensen Type Inequalities for (h_1, h_2) -Convex Functions Pertaining to Total Order Relation." *Mathematics* 10(24) (2022) 4777. doi:10.3390/math10244777 · W · IF 2.592

35. W. Afzal, **K. Shabbir**, T. Botmart. "Generalized version of Jensen and Hermite–Hadamard inequalities for interval-valued (h_1, h_2) -Godunova–Levin functions." *AIMS Mathematics* 7(10) (2022) 19372–19387. doi:10.3934/math.20221064 · W · IF 2.739
36. X. Zhang, **K. Shabbir**, W. Afzal, H. Xiao, D. Lin. "Hermite–Hadamard and Jensen-Type Inequalities via Riemann Integral Operator for a Generalized Class of Godunova–Levin Functions." *Journal of Mathematics* (2022) 3830324. doi:10.1155/2022/3830324 · X · IF 1.555
37. W. Afzal, A. Alb Lupaş, **K. Shabbir**. "Hermite–Hadamard and Jensen-Type Inequalities for Harmonical (h_1, h_2) -Godunova–Levin Interval-Valued Functions." *Mathematics* 10(16) (2022) 2970. doi:10.3390/math10162970 · W · IF 2.592
38. J. Iqbal, **K. Shabbir**, L. Guran. "Stability Analysis and Computational Interpretation of an Effective Semi-Analytical Scheme for Fractional Order Non-Linear Partial Differential Equations." *Fractal and Fractional* 6(7) (2022) 393. doi:10.3390/fractalfract6070393 · X · IF 3.577
39. J. Jia, **K. Shabbir**, K. Ahmad, N. A. Shah, T. Botmart. "Strong Convergence of a New Hybrid Iterative Scheme for Nonexpensive Mappings and Applications." *Journal of Function Spaces* (2022) 4855173. doi:10.1155/2022/4855173 · X · IF 1.807
40. J. Iqbal, **K. Shabbir**, L. Guran. "Semi-Analytical Solutions of Some Nonlinear-Time Fractional Models Using Variational Iteration Laplace Transform Method." *Journal of Function Spaces* (2021) 8345682. doi:10.1155/2021/8345682 · X · IF 1.807
41. Z. Lv, M. J. A. Junjua, M. T. Tahir, **K. Shabbir**. "Certain Bounds of Regularity of Elimination Ideals on Operations of Graphs." *Mathematical Problems in Engineering* (2021) 3697430. doi:10.1155/2021/3697430 · W · IF 1.305
42. A. R. Nizami, **K. Shabbir**, M. S. Sardar, M. Qasim, M. Cancan, S. Ediz. "Base polynomials for degree and distance based topological invariants of n -bilinear straight pentachain." *Journal of Information and Optimization Sciences* 42(7) (2021) 1479–1495. doi:10.1080/02522667.2021.1903202 · Non-HEC
43. Y.-P. Lv, **K. Shabbir**, Sundus S., F. Ali, J. Kafle. "Extragradient method for fixed points in $CAT(0)$ spaces." *Journal of Function Spaces* (2021) 7808255. doi:10.1155/2021/7808255 · X · IF 1.807
44. T.-M. Yu, A. A. Shahid, **K. Shabbir**, Y.-M. Li. "An iteration process for a general class of contractive-like operators: Convergence, stability and polynomiography." *AIMS Mathematics* 6(7) (2021) 6699–6714. doi:10.3934/math.2021393 · X · IF 0.882
45. D. A. Raza, M. Alrowaili, M. Javaid, **K. Shabbir**. "Computing Bounds of Fractional Metric Dimension of Metal Organic Graphs." *Journal of Chemistry* (2021) 5539569. doi:10.1155/2021/5539569 · X · IF 1.726
46. S. E. Farooq, **K. Shabbir**, S. Qaisar, F. Ahmad, O. A. Almatroud. "New Inequalities of Simpson's type for differentiable functions via generalized convex function." *Comptes Rendus Mathématique* 359(2) (2021) 137–147. doi:10.5802/crmath.152 · Non-HEC · IF 0.68
47. A. Naseem, **K. Shabbir**. "The radio number for wedge sum of graphs." *Ars Combinatoria* 151 (2020) 109–122. · W · IF 0.265
48. M. M. Ghalib, A. A. Zafar, M. B. Riaz, Z. Hammouch, **K. Shabbir**. "Analytical approach for the steady MHD conjugate viscous fluid flow in a porous medium with nonsingular fractional derivative." *Physica A* (2020) 123941. doi:10.1016/j.physa.2019.123941 · W · IF 2.50
49. M. Ghalib, A. A. Zafar, Z. Hammouch, M. B. Riaz, **K. Shabbir**. "Analytical results on the unsteady rotational flow of fractional-order non-Newtonian fluids with shear stress on the boundary." *Discrete and Continuous Dynamical Systems, Series S* 13(3) (2020) 683–693. doi:10.3934/dcdss.2020037 · W · IF 0.976
50. A. A. Zafar, **K. Shabbir**, A. Naseem, W. Ashraf. "MHD Natural Convection Boundary-layer Flow Over a Semi-Infinite Heated Plate with Arbitrary Inclination." *Discrete and Continuous Dynamical Systems, Series S* 13(3) (2020) 1007–1015. doi:10.3934/dcdss.2020059 · W · IF 0.976
51. M. J. A. Junjua, **K. Shabbir**, A. Naseem. "Regularity of elimination ideals of certain family of graphs." *Ars Combinatoria* (2019). · W · IF 0.265
52. J.-H. Tang, U. Ali, M. Javaid, **K. Shabbir**. "Zagreb Connection Indices of Subdivision and Semi-Total Point Operations on Graphs." *Journal of Chemistry* (2019) 9846913. doi:10.1155/2019/9846913 · W · IF 1.726
53. **K. Shabbir**. "M-Strings and $(0,2)$ Sigma Model Anomaly." *International Journal of Modern Physics A* 34(10) (2019) 1950058. doi:10.1142/S0217751X19500581 · W · IF 1.7
54. J.-B. Liu, S. Javed, M. Javaid, **K. Shabbir**. "Computing first general Zagreb index of operations on Graphs." *IEEE Access* 7 (2019) 47494–47502. IEEE Xplore 8688410 · W · IF 4.098
55. N. Iftikhar, D. Baleanu, S. M. Husnine, **K. Shabbir**. "Magnetohydrodynamic mixed convection flow of Jeffery fluid with thermophoresis, Soret and Dufour effects and convective condition." *AIP Advances* 9(3) (2019) 1–9. doi:10.1063/1.5086534 · W · IF 1.653
56. **K. Shabbir**, U. Shahzad. "Engineering Adjoint Hypermultiplet." *European Physical Journal Plus* 134(1) (2019) 1–9. doi:10.1140/epjp/i2019-12408-6 · W · IF 2.240
57. A. Naseem, **K. Shabbir**, H. Shaker. "Radio Number of Edge Joint Graphs." *Ars Combinatoria* 139 (2018) 337–351. · W · IF 0.265
58. I. Anwar, **K. Shabbir**. "A Note on: Quasi-Linear Quotients and Shellability of Pure Simplicial Complexes." *Communications in Algebra* 46(2) (2018) 850. doi:10.1080/00927872.2017.1327599 · W · IF 0.481

59. **K. Shabbir**. "Compactified webs and domain wall partition functions." *European Physical Journal C* 77(4) (2017) 1–6. doi:10.1140/epjc/s10052-017-4809-6 · W · IF 5.172
60. A. Iqbal, **K. Shabbir**. "M-strings and transverse orbifold." *European Physical Journal C* 76(11) (2016) 1–6. doi:10.1140/epjc/s10052-016-4453-6 · W · IF 5.172
61. A. Iqbal, **K. Shabbir**. "Elliptic CY3folds and non-perturbative modular transformation." *European Physical Journal C* 76(3) (2016) 1–6. doi:10.1140/epjc/s10052-016-4006-z · W · IF 5.172
62. M. B. Riaz, M. A. Imran, **K. Shabbir**. "Analytic solutions of Oldroyd-B fluid with fractional derivatives in a circular duct that applies a constant couple." *Alexandria Engineering Journal* 55 (2016) 3267–3275. doi:10.1016/j.aej.2016.07.032 · W · IF 3.696
63. A. Iqbal, B. A. Qureshi, **K. Shabbir**. "(q,t) identities and vertex operators." *Modern Physics Letters A* 31(11) (2016) 1650065. doi:10.1142/S0217732316500656 · W · IF 1.338
64. M. B. Riaz, M. A. Imran, **K. Shabbir**. "New Exact Solutions for the Flow of Generalized Maxwell Fluid." *Journal of Computational and Theoretical Nanoscience* 13(8) (2016) 5254–5257. doi:10.1166/jctn.2016.5410 · W · IF 1.665
65. A. Iqbal, A. Z. Khan, B. A. Qureshi, **K. Shabbir**, M. A. Shehper. "Topological field theory amplitudes for A(N–1) fibration." *Journal of High Energy Physics* 12 (2015) 017. doi:10.1007/JHEP12(2015)017 · W · IF 6.023
66. A. Iqbal, B. A. Qureshi, **K. Shabbir**, M. A. Shehper. "Brane Webs and Random Processes." *International Journal of Modern Physics A* 30(33) (2015) 1550202. doi:10.1142/S0217751X15502024 · W · IF 1.7
67. **K. Shabbir**. "Detection of the Torsion Classes in the Brieskorn Modules of Homogeneous Polynomials." *Revista de la Unión Matemática Argentina* 56(2) (2015) 85–94. · W · IF 0.517
68. F. Aroca, M. Gómez-Morales, **K. Shabbir**. "Torical Modification of Newton Non-degenerate Ideals." *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales, Serie A, Matemáticas* 107 (2013) 221–239. doi:10.1007/s13398-012-0100-8 · W · IF 1.074
69. A. Iqbal, C. Kozçaz, **K. Shabbir**. "Refined Topological Vertex, Cylindric Partitions and the U(1) Adjoint Theory." *Nuclear Physics B* 838(3) (2010) 422–457. doi:10.1016/j.nuclphysb.2010.06.010 · W · IF 3.735
70. **K. Shabbir**. "On the Torsion of Brieskorn Modules of Homogeneous Polynomials." *Rendiconti del Seminario Matematico della Università di Padova* 120 (2008) 147–156. · W · IF 0.48

Published Corrections

Listed separately; not counted among the 70 articles.

- W. Afzal, **K. Shabbir**, T. Botmart, S. Treanță. "Correction: Some new estimates of well known inequalities for (h₁,h₂)-Godunova–Levin functions by means of center-radius order relation." *AIMS Mathematics* 8(6) (2023) 13789–13790. doi:10.3934/math.2023702
- W. Afzal, **K. Shabbir**, T. Botmart. "Correction: Generalized version of Jensen and Hermite–Hadamard inequalities for interval-valued (h₁,h₂)-Godunova–Levin functions." *AIMS Mathematics* 8(6) (2023) 13793–13794. doi:10.3934/math.2023704
- J. Jia, **K. Shabbir**, K. Ahmad, N. A. Shah, T. Botmart. "Corrigendum to Strong Convergence of a New Hybrid Iterative Scheme for Nonexpensive Mappings and Applications." *Journal of Function Spaces* (2022) 9815927. doi:10.1155/2022/9815927

RESEARCH SUPERVISION

Three PhD graduates, two PhD theses submitted in 2026, 37 MPhil graduates and 38 BS (Hons) projects.

Doctoral Supervision

Scholar	Thesis	Period	Status
Khushdil Ahmad	Posets in the Intersection of Combinatorics and Category Theory	2021 – 2026	Graduated
Waqar Ul Hassan	Heat and Mass Transfer Models for Non-Newtonian Fluids in Cylindrical Domains with Fractional Derivatives	2020 – 2025	Graduated
Javed Iqbal	Convergence and Stability Analysis for Some Fractional Order Nonlinear Models	2019 – 2024	Graduated
Irfanullah (ASSMS, Reg. 2020-GCUL-PhD-ASSMS-65)	Complex Geometry of Orbits of Real Forms in Flag Varieties	2020 – 2026	Thesis submitted
Muhammad Bin Nasir (ASSMS, Reg. 2020-GCUL-PhD-ASSMS-64)	Concrete Finite Group Quotients and Ramified Covers in Complex Geometry	2020 – 2026	Thesis submitted
Raheel Farooki (ASSMS, Reg. 2020-GCUL-PhD-ASSMS-63)	Classification of Pseudoconcave Homogeneous Spaces	2020 – present	Completing remaining requirements
Muhammad Junaid Ahmad Junjua	Regularity of elimination ideals of graphs	2016 – present	In progress

MPhil Graduates (37)

1. Muhammad Asad (2026). *Combinatorial Analysis of Shuffles for Nonlinear Trees in Tensor Product Operads*. Co-supervisor: Dr Eric Rubiel Dolores-Cuenca.
2. Umm e Farwa (2026). *Hodge-Laplacian Methods for Stable and Canonical Cycle Representatives in Persistent Homology*. Co-supervisor: Dr Eric Rubiel Dolores-Cuenca.
3. Ansa Tahir (2026). *A Topological Study of Quasi-Periodic Signals using Sliding Window Persistent Homology*. Co-supervisor: Dr Eric Rubiel Dolores-Cuenca.
4. Muhammad Fahad (2026). *Investigating the Explicit Relationship Between Rational Tangles and the Farey Graph*. Co-supervisor: Dr Anderson Vera.
5. Bushra Waris (2023–2025). *Numerical Investigation of Fractional Order Differential Equations using Legendre Neural Networks*.
6. Ali Arsalan (2021–2025). *Development of Lagrange Interpolating Polynomial between Physiochemical Properties and Topological Indices*.
7. Irshad Ahmad (2021–2025). *Optimized Iterative Approach to Fixed Points of Generalized Nonexpansive Operators with Numerical Applications*.
8. Beenish Zafar (2022–2024). *Exploring the Combinatorial Properties of Posets and Integer Partitions*.
9. Khadija Ahsan (2022–2024). *Extra Gradient Techniques for Solving Some Problems in Fixed Point Theory*.
10. Mubashar Hussain (2022–2024). *Solving Linear Delay Differential Equations Using Operational Matrices with Extreme Learning Machine Algorithm*.
11. Inaam-Ur-Rehman (2022–2024). *Exploring Fractional Differential Equations through Orthogonal Neural Networks*.
12. Muhammad Afzaal (2021–2023). *On Sarw-Compactness, Sarw-Connectedness and Separation Axioms in Topological Spaces*.
13. Ramzan Afzal (2021–2023). *On Rogers–Ramanujan Identities and Their Properties*.
14. Faraz Ali (2021–2023). *On the Stability and Convergence for the Jungck-Type Iterative Schemes*.
15. Rizwan Ali (2021–2023). *Milnor Fibrations and Regularity Conditions for Real Analytic Mappings*.
16. M. Junaid Akram (2021–2023). *Algebraic Integers of Pure Quintic Extensions*.
17. Hina Saeed (2021–2023). *Radical Ideal Based Zero Divisor Graph of a Commutative Ring*.
18. Zaheer Hussain (2021–2023). *Computation for Lucky Number of Some Families of Planar Graphs*.
19. Ahmad Raza (2021–2023). *Computing Total Absolute Difference Edge Irregularity Strength of Some Families of Graphs*.
20. Muhammad Tayyab Shafiq (2020–2022). *On NH-Number of Neighborhood Complexes*.
21. Nazia Nazar (2020–2022). *Approximating Fixed Points of Generalized α -Nonexpansive Mappings in Uniformly Convex Banach Spaces*.
22. Amir Rasheed (2020–2021). *Characteristics of Arithmetic Functions and Their Graphs*.

23. Aftab Zafar (2020–2021). *Hermite–Hadamard and Jensen-Type Inequalities for Interval-Valued Generalized Non-Convex Functions*.
24. Waqar Afzal (2020–2021). *Hermite–Hadamard and Jensen-Type Inequalities for Generalized Interval-Valued (h_1, h_2) -Godunova–Levin Functions*.
25. Amad Adrees (2020–2021). *Jensen, Hermite–Hadamard and Ostrowski-Type Inequalities for a Generalized Class of Stochastic Convex Functions*.
26. Muhammad Tajammal Tahir (2020–2021). *Algebraic Characterization of Elimination Ideals Associated to Graphs*.
27. Muhammad Jahangir Jalal (2019–2020). *On m -Polar (a, b) -Fuzzy Positive Implicative Ideals in BCK-Algebras*.
28. Ahsan Iqbal (2019–2020). *Novel Concepts of Doubt Bipolar Fuzzy Fantastic Ideals in BN-Algebra*.
29. Wardah (2019–2020). *Regularity Bounds of Elimination Ideals*.
30. Shan e Farooq (2019–2020). *Simpson's and Katugampola Fractional Integral Inequalities and Their Applications*.
31. Muhammad Qasim (2019). *Schultz Invariants of Linear Pentachains*.
32. Hassan Mabroor (2017). *On Characterization of f -Ideals*.
33. Muhammad Rehman (2017). *On Gröbner Bases of Balanced Polyominoes Ideals*.
34. Eman Haider (2015). *On the Chromaticity of Ladders*.
35. Shumaila Naseer (2014). *Face Anti-Magic Labeling of Graphs*.
36. Madeeha Javed (2013). *Topological Invariants of Fiber of Mixed Polynomial*.
37. Sadaf Naveed (2009). *Some Estimates of Hardy Type Inequalities*.

BS (Hons) Research Projects (38)

1. Hafiz Huunzala U Din (2026). *Mathematical Foundations of Public-Key Cryptography: Factorization and Elliptic Curves*.
2. Hadia Riaz (2026). *An Introduction to Group-Based Cryptography with Applications*.
3. Zunaira Sayed (2025). *Enhancing Cryptographic Keys Using Tropical Algebra*.
4. Momina Babar (2025). *Graph Theoretical Analysis of Sudoku Structure, Properties and Application*.
5. Tooba Zahoor (2024). *Syzygy Conditions over a Polynomial Ring*.
6. Yashfa Javed (2024). *Computation of Gröbner Basis for Ideals over Finite Rings*.
7. Ayesha Saleem (2023). *On Some Combinatorial Properties of Matroids*.
8. Aleeha Ijaz (2021). *Some Properties of Bessel Functions*.
9. Hamzah Naseer (2021). *A Review of Fejér–Hadamard Inequality for Harmonically Convex Functions*.
10. Junaid Akram (2021). *A Review of Hermite–Hadamard and Jensen-Type Inequalities for Non-Convex Functions*.
11. Saira Bano (2021). *Some Properties of η -Convex Stochastic Processes*.
12. Rabbia Ashfaq (2020). *Cryptography and Network Security*.
13. Fareeha Yaqub (2020). *Some Inequalities for s -Convex Functions*.
14. Zuha Idrees (2020). *Hermite–Hadamard Type Inequalities for h -Convex Stochastic Processes*.
15. Hafiza Fasiha Faiz (2019). *Some Topics in Tropical Algebra*.
16. Seroosh Jameel (2019). *A Review of Topological Groups*.
17. Bisma Ijaz (2019). *Graph Theory in Sudoku*.
18. Ghulam Mustafa (2018). *On Commutative Rings Graded by Groups*.
19. Hamza Saeed (2018). *On Reconstruction of Extremal Trees*.
20. M. Adeel Ashraf (2018). *Factorability in Quadratic Number Fields*.
21. Nusrat Mehdi (2017). *Some Facts about Power Graph*.
22. Eram Shahzadi (2017). *Coloring and Chromatic Polynomial of Cycle Type Graphs*.
23. Arooj Fatima (2017). *On Rainbow Coloring and Rainbow Connection Number of Some Trees*.
24. Hafiz Abdul Rehman (2017). *Computing the Metric Dimension of Wheel-like Graphs*.
25. Mehwish Mubeen (2016). *Introduction to Finite Element Analysis*.
26. Hira Rashid (2016). *On Topological Uniform Structures*.
27. Sana Latif (2016). *Introduction to Interval Analysis*.
28. Noor Fatima (2016). *Continued Fractions and Euclidean Algorithm*.
29. Zunaira Tahir (2016). *Orthogonal Polynomials and Their Applications*.
30. Kainat Akbar (2015). *Non-Linear Diophantine Equations*.

31. Fizza Miraj (2015). *Multiplicative Functions and Möbius Inversion Formula*.
32. Maryam Yousaf (2014). *On Some Fixed Point Theorem*.
33. Fatima Gul (2014). *Eulerian and Hamiltonian Graphs*.
34. Aliya Noreen (2014). *Antimagic Labeling of Graphs*.
35. Sabiha Tariq (2014). *Mathematical Models for Inventory Management*.
36. Malik Qudratullah (2013). *Tropical Meromorphic Functions*.
37. Maham Zahra (2013). *Ramsey Number of Graph*.
38. Madiha Irfan (2013). *Fundamental Theorem of Tropical Algebra*.

EDITORIAL WORK AND PEER REVIEW

Editorial Roles

- **Managing Editor**, *Journal of Prime Research in Mathematics*, ASSMS (2014 – present; Editor 2019–2020).
- **Lead Editor**, special proceedings volume of AS-ICMSET 2025 in honour of Prof. Abdus Salam (2025).
- **Guest Editor**, *Fractal and Fractional* (MDPI), special issue [Metric Spaces with Its Application to Fractional Differential Equations](#).
- **Advisory Board Member**, *Scientific Inquiry and Review*, University of Management and Technology.
- **Editor and Reviewer**, 10th International Congress on Industrial and Applied Mathematics (ICIAM 2023), Waseda University, Tokyo (Aug 2023).
- **Reviewer**, *Mathematical Reviews*, American Mathematical Society.

Journal Reviewing

Referee for *Computational and Applied Mathematics*; *Zeitschrift für Angewandte Mathematik und Mechanik*; *Advanced Theory and Simulations*; *Journal of Applied Analysis and Computation*; *Journal of Applied Mathematics and Computing*; *IEEE Access*; *Journal of Physics A*; *Molecular Physics*; *Symmetry*; *Heliyon*; *Complexity*; *International Journal of Differential Equations*; *International Journal of Applied and Computational Mathematics*; *Scientific Annals of Computer Science*; *Turkish Journal of Inequalities*; *Punjab University Journal of Mathematics*; *Journal of Nepal Mathematical Society*; *Scientific Inquiry and Review*; *Qeios*; *Songklanakarin Journal of Science and Technology*.

Evaluation of Research Proposals and Awards

- Evaluator, HEC 10th Best Research Awards (Mar 2025).
- Reviewer, HEC postdoctoral research proposals, ten projects (since Sep 2023).
- Reviewer, HEC National Research Program for Universities (NRPU), including Project 4562 and ten further proposals (2020–2022).
- Reviewer, Best Researcher Award, SHEN (since 2017).

CONFERENCES, KEYNOTES AND INVITED TALKS

Conferences and Schools Convened

- **Convener**, Abdus Salam International Conference on Mathematical Sciences and Emerging Technologies (AS-ICMSET 2025), ASSMS, GCU Lahore, 24–26 Nov 2025.
- **Convener**, International School on New Trends in Computational Algebraic Geometry and Its Applications (NTICAGAIA-2025), ASSMS, 18–21 Nov 2025.
- **Coordinator**, International Conference on Mathematics and Mathematics Education, GCU Lahore with the Indonesian Mathematical Society (Central Region), 5–6 Dec 2024.
- **Conference Coordinator and Organizing Committee**, International Conference on Mathematics and its Applications, GCU Lahore, 13–15 Nov 2018.
- **Organizing Committee**, 3rd International Conference on 21st Century Mathematics (2007) and 2nd World Conference on 21st Century Mathematics (2005), ASSMS.

Keynote and Invited Talks

Date	Event	Role
Aug 2026	International Conference on Multidimensional Governance and Educational Transformation (ICMGET 2026), Indonesia	Guest Speaker
May 2026	International İbrahim Hakkı Education and Science Congress, Siirt University, Türkiye	Keynote Speaker
Nov 2025	4th International Conference of Sciences, Rawalpindi Women University	Keynote Speaker
May 2025	5th International Conference on Modern Trends in Business, Hospitality and Tourism	Invited Speaker: <i>Mathematical Modeling of Tourism Development: An Application to Southeastern European Tourism</i>
Apr 2025	7th International Conference on Pure and Applied Mathematics (ICPAM-2025), University of Sargodha	Invited Speaker
Apr 2025	3rd International Conference on Recent Advances in Mathematics (CORAM 2025), University of Education, Lahore	Keynote Speaker
Apr 2025	8th UMT International Conference on Pure and Applied Mathematics	Keynote Speaker
Apr 2025	1st National Conference on Mathematics: Quality Education for Sustainability, Baba Guru Nanak University	Main Speaker
Dec 2024	2nd International Conference on Mathematics for Sustainable Future (ICMSF-2024), The Women University Multan	Keynote Speaker
Dec 2024	3rd International Conference on Recent Developments in Pure and Applied Mathematics, GCU Faisalabad and GCWU Faisalabad	Keynote Speaker
Dec 2024	International Conference on Mathematics and Mathematics Education, Indonesian Mathematical Society	Main Speaker
May 2024	Advancement in Mathematics, GC University Faisalabad	Invited Speaker
2024	Hybrid seminar for students, University of Education, Lahore	Invited Speaker
Dec 2023	6th International Conference on Pure and Applied Mathematics, University of Sargodha	Invited Speaker
Dec 2023	2nd International Conference on Recent Advances in Mathematics (CORAM 2023)	Paper: <i>The Algebra of Boole: Unleashing the Power of Logic and Cryptography</i>
Jul 2023	9th SEAMS-UGM International Conference and Summer School on Number Theory and Cryptography, Universitas Gadjah Mada	Invited Speaker
May 2023	Academic Days of Arad (33rd edition) and International Workshop on Computer Security, Arad, Romania	Invited Speaker
Dec 2022	1st National Conference on Emerging Horizon in Science and Technology, University of Central Punjab	Invited Speaker
Dec 2022	Seminar on Topology of Shapes, Government Islamia Graduate College for Women, Lahore	Main Speaker
Dec 2022	3rd National Conference on Mathematics and Applications, University of Sargodha	Invited Speaker
Nov 2022	Algebraic Geometry Seminar Series, KBK Aljabar, UIN Walisongo Semarang (online)	Guest Speaker
Oct 2022	International Workshop on Recent Developments in Pure and Applied Mathematics, GC University Faisalabad	Invited Speaker

Date	Event	Role
Feb 2020	5th International Conference on Pure and Applied Mathematics (ICPAM-2020), University of Sargodha	Keynote Speaker
May 2011	Colloquium, Instituto de Matemáticas, UNAM (Cuernavaca)	<i>Milnor Algebras and Brieskorn Modules of Homogeneous Polynomials</i>
2009	Johannes Kepler University Linz, Austria	<i>Gauss–Manin Connections and Torsion Classes of Brieskorn Modules</i>
2009	University of Vienna, Austria	<i>Some Algebraic and Geometric Invariants</i>
Mar 2008	LUMS 2nd International Conference on Mathematics and its Applications in Information Technology	Paper presentation
Jul 2007	1st Mathematics Conference, CASPAM, Bahauddin Zakariya University, Multan	Paper presentation

Scientific and Advisory Committees

- International Organizing Committee, Second Sharjah International Conference on Advanced Material (SICAM), University of Sharjah, UAE, Apr 2026.
- Scientific Advisory Committee, 4th International Conference on Mathematical Empowerment and Future Trends, GC University Faisalabad, Nov 2025.
- National Scientific Committee, ICPAM-2025, University of Sargodha, Apr 2025.
- Advisory Committee, CORAM 2025 and CORAM 2023, University of Education, Lahore.
- Advisory Committee, ICMSF-2024; Scientific Advisory Committee, 1st ICMSF (2022), The Women University Multan.
- National Scientific Advisory Committee, 7th UMT International Conference on Pure and Applied Mathematics (2023).
- Scientific Advisory Committee, Academia International Conference on Mathematics and Mathematics Education (AICMME-2021), Siirt University, Türkiye.

International Schools and Conferences Attended

- CIMPA Research School on Algebra and Algebraic Geometry for Applications (Feb–Mar 2024).
- ICTP Advanced School and Workshop on Geometry of Discrete Actions, Trieste (2015).
- CIMPA schools: Singularities in Geometry, Topology, Foliations and Dynamics, UNAM Cuernavaca (2014); Algebraic Geometry and Number Theory, Istanbul (2014); Geometry and Topology of Singular Varieties, Hanoi (2013); Arrangements, Local Systems and Singularity Theory, Istanbul (2007); Configuration Spaces and Applications, Lahore (2007); New Trends in Singularity Theory, Madrid (2006).
- 50 Years of Topology, Geometry and Physics, Cinvestav, Mexico City (2011); Algebraic Methods in Geometry, in honour of Xavier Gómez-Mont, CIMAT, Guanajuato (2011).
- ICTP Summer School and Conference on Hodge Theory and Related Topics (2010); ICTP Advanced School and Conference on Knot Theory and its Applications (2009).
- International Conferences on 21st Century Mathematics, ASSMS (2009, 2013); 8th International Pure Mathematics Conference, Islamabad (2007).

Outreach and Student Competitions

- Resource person, GCU Lahore Math Circle activities in Lahore schools (2022–2023); participant, Experiential Workshop on Math Circles Outreach, LUMS (2022).
- Judge, International Walisongo Science Competition, Indonesia (2022); poster competition, University of Central Punjab (2022); 10th Open House, Namal University (2024).
- Screening test, 2nd National Science Talents Contest, HEC and Pakistan Atomic Energy Commission (2005).

HONOURS AND AWARDS

Year	Honour
2022	Diploma of Recognition for Research Publication, Excellence Awards Gala, "Vasile Goldiş" Western University of Arad, Romania
2018 – 2019	Publication honorarium, GC University Lahore
2017	Nominated by GC University Lahore for the COMSTECH Best Research Paper Award
2015	Offered a postdoctoral fellowship at ICMC, Universidade de São Paulo, Brazil
2012	Shortlisted, HEC Best Young Research Scholar Award
2010	CONACYT–TWAS Postdoctoral Fellowship (2009 cycle), awarded for research at UNAM, Mexico
2010 – present	HEC-approved PhD supervisor

MEMBERSHIPS, EXAMINING AND SERVICE

Professional Memberships

- National Mathematical Society of Pakistan (Interim President since 2026)
- Asian Council of Science Editors (since 2024)
- ICTP Alumni Pakistan (since 2020)
- UNESCO–The World Academy of Sciences (TWAS), Trieste (since 2014)
- Punjab Mathematical Society (since 2012)
- Old Ravian Union (since 2008)

External Examining

Date	Candidate and Thesis	Institution	Role
Jul 2026	Munaza Chaudhry, <i>Mathematical Analysis of Bio-convective Nanofluid Flow Through Various Geometries Involving Thermal Radiation, Activation Energy for Optimization of Heat and Mass Transfer</i>	GC University Faisalabad	PhD External Examiner
Nov 2024	Asmat Batool, <i>Existence and Approximation of Solution of Fractional Boundary Value Problems</i>	University of the Punjab	PhD External Examiner
May 2024	Ahmad Bilal, <i>Bounds for the Spectral Radii and Energies of Graph Operations</i>	University of the Punjab	PhD External Examiner
Jun 2023	Sana Zafar	Lahore College for Women University	PhD viva voce
Jan 2023	PhD thesis examination	University of Management and Technology, Lahore	PhD Examiner
Apr 2019	Muhammad Yaseen	University of Sargodha	PhD External Examiner

- **MPhil theses examined (11, 2024–2025):** University of the Punjab (Ayesha Saleem and Bilal Ahmad, 2025; Kinza Abdul Ghaffar, 2024); University of Sialkot (Farah Siddique, Zunaira Saeed, Mehreen Zahra, Maryam Munir, Muqadas Shahzad, 2024); University of Central Punjab (Muhammad Azam and Muhammad Ali Hassan, 2024); Riphah International University (Muhammad Arslan Aslam, 2024).
- **Internal Examiner, MPhil, GC University Lahore (2019):** Warda Shoukat, *Comparison of Analytical Solution of a Maxwell Fluid with Slip Effects in view of the Caputo and Atangana–Baleanu Derivatives*; Sania Nasir, *Hydro-magnetic Free Convection Flow of Second Grade Fluid over an Inclined Infinite Plate*.
- **External Examiner at:** University of the Punjab (Lahore, Rawalpindi, Gujranwala and Quaid-e-Azam campuses, and MSc viva voce at affiliated colleges, 2020–2022); ASSMS; COMSATS University Islamabad (Lahore Campus); University

of Management and Technology; University of Engineering and Technology, Lahore; University of Gujrat; University of Sargodha; University of Education, Lahore.

Student Affairs and Co-curricular Leadership

- President, Weightlifting, GC University Lahore (2012–2019), and member of the weightlifting sports-admission selection committee.
- President, Wrestling (2016), member of the wrestling selection committee and of the F.A./F.Sc. Admission Committee (2016).
- President, Rowing and Roving Club (2010–2011); member, basketball selection committee (2010).
- Advisor, Chawala Mathematical Society, GC University Lahore (2008–2011).

REFERENCES

Available on request.