ANAM RANI

Address: 361-B, Tajpura Scheme, Lahore, Pakistan
Email: anamrane@gmail.com
Cell: (+92) 3336181868
Gender: Female
Citizenship Pakistani
Date of Birth: September 18, 1990

OBJECTIVE:

To attain fame in the field of Mathematics and to achieve professional excellence through sincerity by following the principles, utilizing strong research and academic skills and the experience of working at world-leading research institutes. Ambition is to eventually have a broad-based academic career, including research, teaching and management responsibilities.

EDUCATION:

PhD Mathematics 2014 ---2017
Abdus Salam School of Mathematical Sciences, GC University, Lahore Pakistan.

M.Phil Mathematics 2012---2014
Abdus Salam School of Mathematical Sciences, GC University, Lahore Pakistan.

MSC Mathematics 2009 ---2011
Center for Advanced Studies in Pure and Applied Mathematics, Bahauddin Zakriya University, Multan Pakistan.

COURSE WORK:

Major Courses in M.Phil/Ph.D:

1. Real Analysis-I
2. Geometry-I
3. Real Analysis-II
4. Geometry-II
5. Homological Algebra
6. Ordinary Differential Equations
7. Differential Geometry
8. Computational Algebra
9. Combinatorial Commutative Algebra
10. Algebra-I

11. Number Theory
12. Algebra-II
13. Complex Analysis
14.Linear Algebra
15. Commutative Algebra
16. Combinatorics-I
17. Graph Theory

RESEARCH INTEREST:

Research Fields:

- Commutative Algebra
- Combinatorial Commutative Algebra.
- Algebraic and Chemical Graph Theory

PUBLICATIONS:

- A. Rani, A. Fahad, I.F. Hussain, U. Ali and M. Ashraf, A Comparison between Certain Graphs Parameters of Biswapped Networks and their Maximal Twin Preserving Subgraphs with Applications in Determining Complexity, 35 (2024), 1-24, (2024).
- U. Ali, I. Hussain, A. Rani, On the Existence of Fault-tolerant Numbers of Two Bridge Knots, Scientific Inquiry and Review, 6(4), 109-131, (2022).
- X. Zhang, M. Salman, A. Rani, R. Tanveer, U. Ali and Z. Shao, Metric Identification of Vertices in Polygonal Cacti, Computer Modeling in Engineering & Sciences, 136(1), 884-899, (2023).
- A. Rani, M. Imran, A. Razzaque and U. Ali, Properties of Total Transformation Graphs for the General Sum-Connectivity Index, Complexity, 2021, 6616056,1-6, (2021).
- A. Rani and U. Ali, Degree-Based Topological Indices of Polysaccharides: Amylose and Blue Starch-Iodine Complex, Journal of Chemistry, 2021, 6652014, 1-10, (2021).
- A. Rani, M. Imran and U. Ali, Sharp Bounds for the Inverse Sum Indeg Index of Graph Operations, Mathematical Problems In Engineering, 2021, 5561033, 1-11, (2021).
- K. Wahid, A. Das, A. Rani, S. Amanat, M. Imran and U. Ali, On Twin Preserving Spanning Subgraphs, Journal of Intelligent & Fuzzy Systems, 40, 9505–9513, (2021).
- G. Abbas, A. Rani, M. Salman, T. Noreen and U. Ali, Hosoya Properties of Commuting Graph Associated with the Group of Symmetries, Main Group Metal Chemistry, 44,173-184, (2021).
- T. Dumitrescu and A. Rani, A Note on Perinormal Domains, Journal of Commutative Algebra, 10(3), 305-315, (2018).

- A. Rani and T. Dumitrescu, Perinormal Rings with Zero Divisors, Journal of Algebra and its Applications, 17(3), 1-10, (2018).
- T. Dumitrescu and A. Rani, Perinormal Polynomial Domains, International Electronic Journal of Algebra, 23, 1850055,153-156, (2018).

RESEARCH GRANTS:

Sr. No	Type of Award	Role	Title	Awarding University	Amount (SAR)	Duration
1	KFU NASHER TRACK	PI	Degree- based Topological Indices of Polysaccharides: Amylose and Blue Starch Iodine Complex	King Faisal University	30,000	June – December (2020)
2	KFU NASHER TRACK	PI	Sharp bounds for the inverse sum indeg index of graph operations	King Faisal University	30,000	January-June(2021)
3	KFU NASHER TRACK	PI	Extremal results on general sum-connectivity index of total transformation graphs	King Faisal University	30.000	January-December (2021)

CONFERENCES AND SEMINARS:

- March 2020: Participant, How to use Pearson for online assessments at at King Faisal University, Saudi Arabia.
- March 2020: Participant, Using Blackboard (for online teaching) at King Faisal University, Saudi Arabia.
- August 2020: Participant, Integrating Research into the curriculum at King Faisal University, Saudi Arabia.
- March 2017: Participant as an observer, 4th CASPAM Regional Student Olympiad of Mathematics at BZU, Multan, Pakistan.
- January 2017: Participant, Understanding Salam Event at Abdus Salam School of Mathematical Sciences, GCULahore,Pakistan
- April-June, 2016: Visiting student, Simion Stoilow Institute of Mathematics of the Romanian Academy.

- May 2016: Presenter, Seminar Series on Commutative Algebra at the University of Bucharest, Romania.
- Spring, 2014: Participant, Seminar Series on Algebraic Geometry and Sheaf Theory by Prof. Hironori Shiga at Abdus Salam School of Mathematical Sciences, GCU Lahore, Pakistan
- March 2013: Participant, 6th World Conferenceon21st Century Mathematics at Abdus Salam School of Mathematical Sciences, GCU Lahore , Pakistan.

TEACHING EXPERIENCE:

- **The University of Central Punjab, Lahore (Dec 2017- Dec 2019)**
- **King Faisal University, Saudi Arabia (Dec 2019-Jan 2022)**
- **Bahauddin Zakriya University, Multan (07 Jan 2022-till date)**
- **One year Post PhD Experience (Four year duration of PhD as per HEC Notification)**

ONLINE TEACHING EXPERIENCE:

I have taught online using platforms such as

- **Blackboard**
- **Teams**
- **Zoom**

REFEREES:

Dr. Azeem Haider
Department of Mathematics, College of Science, Jazan, Saudi Arabia
Tel: 00966537609874
Email: aahaider@jazan.edu.sa

Prof. Dr. Usman Ali
CASPAM, Bahauddin Zakariya University, Pakistan
Tel: 00923339473610
Email: uali@bzu.edu.pk

Prof. Dr.Tiberiu Dumitrescu
FacultateadeMatematicasiInformatica,Universityof Bucharest,14 Academiei Str., Bucharest, RO 010014, Romania.
Tel: +40 0731 953946

Email: tiberiu_dumitrescu2003@yahoo.com

Prof. Dr. Gerhard Pfister
Erwin-Schrödinger-Straße D-67663 KaiserslauternGebaude 48/434.
Tel: (0631)205-2336
Email: pfister@mathematik.uni-kl.de