FACULTY DETAILS PROFORMA

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Title	Dr.	First Name	Aakanksha	Last Name	Singh	Photograph
Designation		Assistant Professor (Mathematics)				
Address Office		Aryabhatta College, Benito Juarez Marg, New Delhi 110021, India				
Address Residence:		Rohini, Delhi 110089				
Phone No	**Office**	011-24110490				
	Residence	--				
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Email		aakankshasingh@aryabhattacollege.ac.in				
Web-Page		--				

Educational Qualifications

Degree	Institution	Year
Ph.D. (Mathematics)	Indira Gandhi Delhi Technical University for Women, Delhi	2025
B.Ed.	M.V.C.O.E., Delhi University	2009
M.Sc.(Pure Mathematics)	Miranda House, Delhi University	2008
B.Sc.(H)Mathematics	Miranda House, Delhi University	2006
XII	Kulachi Hansraj Model School, Delhi	2003
X	Kulachi Hansraj Model School, Delhi	2001

Career Profile

- Working at Aryabhatta College, Delhi University from March 2016 – Till Date as an Assistant Professor (Permanent) in Department of Mathematics
- Worked at Miranda House, Delhi University from July 2012 – May 2015 as an Assistant Professor (Adhoc) in Department of Mathematics
- Worked at Aditi Mahavidyalaya, Delhi University from September 2011 – May 2012 as an Assistant Professor (Adhoc) in Department of Mathematics

Administrative Assignments

- Convenor of Nibs and Brushes Committee, Member of Function Committee, Canteen Committee, Infrastructure and Campus Maintenance Committee **(2026-27)**
- Member of Infrastructure Committee, Function Committee, SEC Implementation Committee, Non-teaching & teaching recruitment Committee, Feedback Committee, India Today Ranking Committee **(2025-26)**
- Member of NAAC Criteria-5, Feedback Committee, Review team for AQAR 2023-24, Teaching Recruitment Core Committee, Non-Teaching Recruitment Committee **(2024-2025)**
- Convenor of NAAC Criteria-5 and Alumni Relations committee. Member of Anti-Ragging Committee, Department Student Advisory Board, Document Verification Committee, SEC

Coordination Committee, Research and Publication Committee, Placement Cell, Fee Concession Committee **(2023-2024)**

- Member of Document Verification Committee, Anti-Ragging Committee, Alumni Relations Committee, Placement Cell, Fee Concession Committee **(2022-2023)**
- Member of Student Feedback Review Committee (NAAC), Anti-Ragging Committee, Alumni Relations committee, Fee Concession Committee, Departmental NAAC Co-coordinator **(2021-22)**
- Member of Anti-Ragging Committee, Alumni Relations committee, Feedback and Review Committee **(2020-21)**
- Member of Academic Planning Committee, Document Verification Committee, Fee Concession Committee **(2019-2020)**
- Teacher-In-Charge, Member of Admission Committee, Workload Committee, Attendance Monitoring Committee, Library Committee, Photography Club **(2018-19)**
- Member of Committee related to Caste-based discrimination **(2018-2023)**
- Member of Function Committee, Heritage and Spic Macay, Epicure-The Culinary Cell **(2017-18)**
- Member of Sports Admission Committee, Sports Committee, Fee Concession Committee and Interdisciplinary Subjects (Hons.) Committee **(2016-17)**

Areas of Interest / Specialization

Operations Research, Transportation Problem, Fuzzy Programming

Subjects Taught

Group Theory, Advanced Group Theory, Ring Theory, Linear Algebra, Real Analysis, Differential Equations, Mathematical Modelling and Graph Theory, Bio-Mathematics, Computer Algebra Systems and Related Software, Document Presentation and Preparation Software, General Mathematics-II, Abstract Algebra, Optimization, Field Theory and Galois Extension

Research Guidance

NA

Publications Profile

JOURNAL PUBLICATIONS

- Mukul Badgurjar, **Aakanksha Singh**, Ritu Arora, Shalini Arora (2026): Bipolar fuzzy shadowed transportation problem: novel approaches and sensitivity analysis. *International Journal of Advances in Engineering Sciences and Applied Mathematics*, 1-18. **(ESCI (IF: 1.4))**
- **Aakanksha Singh**, Ritu Arora, Shalini Arora (2026): Bilevel multi-objective transportation problem with spherical fuzzy numbers, OPSEARCH, 1-37. **(ESCI (IF: 1.7), SCOPUS)**
- **Aakanksha Singh**, Ritu Arora, Shalini Arora (2024): A new Fermatean fuzzy multi- objective indefinite quadratic transportation problem with an application to sustainable transportation, *International Transactions in Operations Research*, 32(4), 1977-2022. (**SCIE (IF:3.1), SCOPUS)**
- **Aakanksha Singh**, Ritu Arora, Rajkumar Verma, Shalini Arora (2024): An approach to optimize transportation problems with neutrosophic numbers based on a new ranking function, *Archives of Control Sciences*, 34(3), 625-640. (**SCIE (IF: 1.2), SCOPUS)**
- **Aakanksha Singh**, Ritu Arora, Shalini Arora (2022): Bilevel Transportation Problem in Neutrosophic Environment. *Computational and Applied Mathematics*, 41(1), 1-25.

(**SCIE (IF: 2.6), SCOPUS)**

BOOK CHAPTERS

- **Aakanksha Singh**, Ritu Arora and Shalini Arora (May 2025). An Approach to Solve Non-Linear Neutrosophic Transportation Problem with Volume Discount. In F. Smarandache, M. Jdid, & M. Leyva-Vazquez (Eds.), *Neutrosophic and Plithogenic Inventory Models for Applied Mathematics*. IGI Global Scientific Publishing, Ch.10, 219-246. DOI: https://doi.org/10.4018/979-8-3693-3204-7.ch010

- **Aakanksha Singh**, Ritu Arora and Shalini Arora (Apr 2025): On Finding a Solution of a New Fermatean Fuzzy Transportation Problem: A New Perspective In *Optimization Techniques for Sustainable Environment Under Uncertainty*, Springer Nature, Ch. 9, 149-158. DOI: https://doi.org/10.1007/978-981-96-0389-3_9
- **Aakanksha Singh**, Ritu Arora and Shalini Arora (2023): A novel fully interval-valued intuitionistic fuzzy multi-objective indefinite quadratic transportation problem with an application to cost and wastage management in the food industry In *Fuzzy Optimization, Decision-making and Operations Research*, Springer, Ch. 5, 87-110. DOI: https://doi.org/10.1007/978-3-031-35668-1_5.

Conference Organization/ Presentations

- **Aakanksha Singh**, Ritu Arora, Shalini Arora. Oral paper presentation on "On solving transportation problem with Fermatean fuzzy numbers" In International Conference on Optimization, Learning and Analytics in Business (OLAB-2022) from 15th – 17th December 2022.
- **Aakanksha Singh**, Ritu Arora, Shalini Arora. Oral talk presentation on "On Solving Multi-Objective Transportation Problem with Spherical Fuzzy Numbers" In International Conference on Advances in Smart Materials & Emerging Technologies (ASMET-2021) organized by Department of Applied Sciences and Humanities from 20th -21st December 2021. (ISBN of Abstract Booklet: 978-9-3930-2701-6)

- Ritu Arora, **Aakanksha Singh**, Shalini Arora. Oral paper presentation on "An Aspect of Bilevel Indefinite Quadratic Transportation Problem under Intuitionistic Fuzzy Environment" In Proceedings of 7th International Conference on Fuzzy Systems and Data Mining (FSDM-2021) from 26th –29th October 2021. ISBN: 978-1-64368-215-0(online).

Research Projects (Major Grants/Research Collaboration)/ Patents

Wrist Watch Design Patent [Certificate No.-99252, Design No. -333531-001]

Awards and Distinctions

- Recipient of COMMENDABLE RESEARCH AWARD organized by Indira Gandhi Delhi Technical University for Women, Kashmere Gate, Delhi on 1st May 2025.
- Recipient of MOTIVATIONAL RESEARCH AWARD organized by Indira Gandhi Delhi Technical University for Women, Kashmere Gate, Delhi on 1st May 2025.
- Recipient of COMMENDABLE RESEARCH AWARD organized by Indira Gandhi Delhi Technical University for Women, Kashmere Gate, Delhi on 15th March 2023.

- Qualified GATE -2011 in Mathematics.
- Qualified the eligibility test for lectureship (NET), in June 2011 with AIR-88.
- Secured 5th rank all over Delhi in Regional Mathematics Olympiad, Delhi in 1999.

Other Activities

TRAININGS AND CONFERENCES ATTENDED:

- Attended one-day workshop on Research Integrity organized by IQAC, Aryabhatta College in collaboration with IQAC, University of Delhi.
- Successfully completed an online Faculty Development Programme on 'Cryptography and Information Security' (10th July – 16th July, 2025) under Malaviya Mission Teacher Training Programme (MM-TTP), University Grants Commission (UGC) organized by Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi in collaboration with Department of Mathematics, Hansraj College.
- Successfully completed an online Short-term course on the topic 'Optimization with Neutrosophic Set Theory' organized by National Institute of Technical Teachers Training and Research, Chandigarh from 9-13Oct'2023.
- Successfully completed a two-weeks Refresher Course in "Applicable Mathematics" from 26 July '22-8Aug'22 organized by TLC, Ramanujan College, D.U.
- Successfully attended the webinar on "Understanding Plagiarism Detection Software Ouriginal" on 28 January 2022 organized by University of Delhi in association with eGalactic Pune.
- Successfully completed one week Faculty Development Programme on "Academic Writing" from 17th - 23rd August, 2021.
- Successfully completed Five days national level online "Workshop on Software in Mathematics and Statistics" (WSMS – 2021) organized by the Department of Mathematics, National Institute of Technology Tiruchirappalli from 02nd – 06th August 2021.
- Successfully completed Two-weeks Refresher Course In "Mathematics" organized by Department of Mathematics, Ramanujan College from 16th -30th March 2021.
- Successfully completed Two-weeks Faculty Development Program on "ICT Based New Paradigms of E-Teaching and E-Learning: Digital Pedagogy" from 15th – 30th September, 2020.
- Attended International Conference on Advances in Smart Materials & Emerging Technologies organized by Department of Applied Sciences and Humanities, (IGDTUW) from 23rd–24th January, 2020.
- Attended National Workshop on Stress Management and Emotional Intelligence in Teaching-Learning Environment" organized by Guru Angad Dev Teaching Learning Centre of MHRD, SGTB Khalsa College, University of Delhi, on 17th March, 2018.
- Attended National Conference on Technological Empowerment of Women" organized by The National Academy of Sciences, India (NASI) at Vigyan Bhawan, New Delhi on 8th –9th March, 2018.
- Successfully completed UGC sponsored Orientation Programme organized by UGC-HRDC, Jamia Millia Islamia, New Delhi from 23rd May – 19th June, 2017.
- Successfully completed FYUP training workshop on "Foundation Course in Building Mathematical Ability" organized by CPDHE, University of Delhi on 15th – 17th July, 2013.

- Attended International Conference on "The Legacy of Srinivasa Ramanujan" organized by University of Delhi on 17th – 22nd December, 2012.

ACTIVITIES ORGANISED

- Organizing Team Member: Short- Term Programme/Faculty Development Programme on "Significance of Vedic Gyan Parampara in Modern Era Programme" under the aegis of University Grant Commission - Malaviya Mission Teacher Training Programme (UGC-MMTTP) from 19th - 26th December, 2024.
- Teacher Coordinator: Alumni Webinar on the topic "A glimpse of my journey from confusion to clarity" with alumni Mr. Mayank Bamola organised by Aryabhatta Mathematical Society, Aryabhatta College held on 5th March 2022 (online mode).
- Co-Convener: One Week (Online) Faculty Development Programme on "Significance of Vedic Mathematics in Modern Era" organised by Aryabhatta College, University of Delhi in collaboration with Shiksha Sanskriti Utthan Nyas & Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi from 5th December– 10th December, 2022.
- Mentor of Aryabhatta Mathematical Society, Aryabhatta College (2018-19).