



Shaheed Rajguru College of Applied Sciences for Women
University of Delhi
Faculty Profile

Name	DR. RITIKA CHOPRA	
Designation	Assistant Professor	
Email	Ritika.chopra@rajguru.du.ac.in	
Degree	Institution	Year
Ph.D. (Mathematics)	Faculty of Mathematical Sciences, University of Delhi	2018
M.Phil (Mathematical Science)	Banasthali University	2009
M.Sc Mathematics	Miranda House, University of Delhi	2008
B.Sc (H) Mathematics	Miranda House, University of Delhi	2006
NET-LS	UGC-CSIR	2008
NET-JRF	UGC, CSIR	2009,2011
Areas of Interest / Specialization -		
Operational Research, Optimization Techniques, Fuzzy Programming, Algebra, Group Theory, Ring Theory.		
Association with Professional Bodies		
ORSI		
Publications Profile		
• Singh, J., Chopra, R., Saxena, R.R, Garg, P. K., 2025, "A new technique to solve game matrix with neutrosophic payoffs", Neutrosophic Sets and Systems, 87, 161-176. • Kumar, A, Chopra, R., Saxena, R.R, 2022, "An enumeration technique for Transshipment problem in Neutrosophic environment", Neutrosophic Sets and Systems, 50, 552-563. • Kumar, A, Chopra, R., Saxena, R.R, 2021, "An efficient enumeration technique for a Transportation problem in Neutrosophic environment", Neutrosophic Sets and Systems, 47, 354-365. • Kumar, A, Chopra, R., Saxena, R.R, 2020, "An efficient algorithm to solve Transshipment problem in Uncertain environment", International Journal of Fuzzy Systems. Doi 10.1007/s40815-020-00923-9 • Chopra, R., Saxena, R.R, 2019, "Fuzzy linear programming with Trapezoidal intuitionistic fuzzy numbers", Advances in fuzzy Mathematics, 14(1), 41-52. • Saxena, R.R, Chopra, R., Kumar, S, 2017, "An application of Matrix Games with trapezoidal intuitionistic		

fuzzy pay offs to transportation problems”, Lecture Notes in Management Science, 9, 57-65.

- **Chopra, R.**, Saxena, R.R, 2017, “Solving fuzzy linear programming problems with Bell shaped membership functions”, The Journal of Fuzzy Mathematics, 25(4), 795-804.
- Kumar, S., **Chopra, R.** and Saxena, R.R, 2016, “A fast approach to solve matrix games with pay-offs of trapezoidal fuzzy numbers”, Asia Pacific Journal of Operational Research, 33(6), 1650047(1-14).
- **Chopra, R.**, Saxena, R.R, 2015, “Possibilistic linear programming with Triangular intuitionistic fuzzy numbers”, Advances in Fuzzy Mathematics, 10(1), 91-98.
- **Chopra, R.**, Saxena, R.R, 2015, “Type-2 fuzzy linear programming problem with interval valued linear programming approach”, The Journal of Fuzzy Mathematics, 23(4), 813-820.
- Kumar, S., **Chopra, R.** and Saxena, R.R, 2015, “Matrix Games with triangular intuitionistic fuzzy pay offs”, The Journal of Fuzzy Mathematics, 23(3), 611-622.
- **Chopra, R.**, Saxena, R.R, 2014, “An approach to solve possibilistic linear programming problems”, Applied Mathematics; 5(2), 226-233.
- **Chopra, R.**, Saxena, R.R, 2013, “Model for fuzzy multiple objective problems”, American Journal of Operations Research; 3(1), 65-69.
- Kumar, S., **Chopra, R.** and Saxena, R.R, 2013, “Method to solve fuzzy game matrix”, International Journal of Pure and Applied Mathematics, 89(5), 679-687.

Books/ Book Chapters:

- **Chopra, R.**, Gupta, A., 2025, “Introductory Ring Theory”, Cambridge University Press, U.K. ISBN: 9781009633529.
- S. Kumar and **R. Chopra**, 2025, “A Generalized Approach to Derive a Fuzzy Optimal Value of a Constant Sum Game with Payoffs as n-Polygonal Fuzzy Numbers" in Fuzzy Logic in Real Life Scenarios, (133-156), (20126).
- **Chopra, R.**, 2025, “Relationship among indices of Fuzzy Sets and Neutrosophic Sets”, Neutrosophic Theory and Applications, Neutrosophic Science International Association (NSIA) Publishing House, USA, 4, 62-78. ISBN: 978-1-59973-785-0

Research Guidance: Projects/Research Internships

- Supervised one undergraduate student for the award of B.Sc. (Hons.) with Research in Mathematics (**Academic Project**) in 2025-26 on the topic “Quiver Representation of Traffic Management Using Neural Networks”.
- Supervised one undergraduate student for the award of B.Sc. (Hons.) with Research in Mathematics (**Academic Project**) in 2025-26 on the topic “Email Spam Detection using Quiver Representation with Neural Networks”.
- Supervised one undergraduate student for the award of B.Sc. (Hons.) with Research in Mathematics (**Academic Project**) in 2025-26 on the topic “Quiver Representation of Neural Networks for Recommendation Systems”.
- Supervised one undergraduate student for the award of B.Sc. (Hons.) with Research in Mathematics (**Academic Project**) in 2025-26 on the topic “Representation of Logic Gates using Quiver Theory - An algebraic approach to computational logic”.
- Co-mentored the **research internship** of four undergraduate students on the topic “Indian States Climate Vulnerability Index Analysis” in 2024-25.
- Mentored the **research internship** of four undergraduate students on the topic “A Study on Efficiency Evaluation of State Transport Undertakings in India” in 2023-24.
- Mentored the **research internship** of three undergraduate students on the topic “A Review on Linear

Algebra of Neural Networks” in 2022-23.

- Mentored the **research internship** of two undergraduate students on the topic “Chapters in Abstract Algebra” in 2021-22.
- Completed **Innovation Project** SRCAS-316 titled “A low-cost solar inverter- a stand-alone system for the households” as a Principal Investigator in 2015-16.

Awards and Distinctions

Gold Medal in M.Phil

Administrative Responsibilities

- Care Taker Officer, NCC
- Convenor, Fashion Society
- Co-convenor, Timetable Committee
- Co-convenor, Fee Concession Committee
- Member, Academic Audit
- Member, Anti Drug and Narcotic Committee