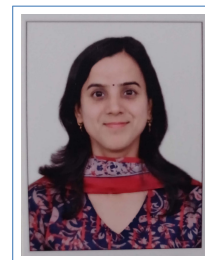


RAJNI GUPTA

Curriculum Vitae

Assistant Professor, Department of Mathematics
St. Stephen's College, University of Delhi

☎ (+91)9711213240
✉ rajni@ststephens.edu



Professional Experience

- 2017–Present **Assistant Professor**, Department of Mathematics, **St. Stephen's College**, University of Delhi.
2015–2017 **Guest Lecturer**, Department of Mathematics, **Kirori Mal College**, University of Delhi.
2016–2018 **Guest Lecturer**, Department of Mathematics, **Dayal Singh College**, University of Delhi.
2017(Jan–Feb) **Guest Lecturer**, Department of Mathematics, **Daulat Ram College**, University of Delhi.

Academic Credentials

- 2026– **Ph.D., Mathematics**, Pursuing, Department of Mathematics, University of Delhi.
2014–2016 : **M.Phil, Mathematics**, Department of Mathematics, University of Delhi.
Thesis Title: *Fusion Frames in Hilbert Spaces*
Percentage : 82%
2012–2014 : **Master of Science, Mathematics**, Kirori Mal College, University of Delhi.
Percentage : 92.12% (1474/1600)
2009–2012 : **Bachelor of Science, Mathematics**, Kirori Mal College, University of Delhi.
Percentage : 89.71% (1256/1400)
2008–2009 : **Senior Secondary(C.B.S.E), Science**, R.P.V.V., Yamuna Vihar, Delhi-53.
Percentage : 88.5%
2006–2007 : **Secondary(C.B.S.E)**, G.G.S.S.School, Dayal Pur, Delhi-94.
Percentage : 90%

Awards & Academic Achievements

- CSIR-NET **AIR-11** and **AIR-26** in Dec 2014 and June 2015, respectively.
GATE **AIR-54** in 2015 and have cleared thrice from 2014 to 2016.
2014 University Rank under 10 and Secured 3rd Rank in M.Sc(H) Mathematics, at Kirori Mal College.
2012 **Academic Award** for securing **2nd Rank at University Level** and Consistently College topper in graduation, Kirori Mal College.
2007 **Indira Award** for securing 2nd rank at Zonal level in C.B.S.E. 10th standard.

Teaching Assistantship

- 2017–Present **I have taught several papers during my teaching experience. Some of these are as below:**
DSE Papers **Linear Analysis, Research Methodology, O.D.E., P.D.E., Number theory, Calculus, etc., to Mathematics honours students.**
GE Papers **Calculus, Differential equations, Real Analysis, Multivariate Calculus, etc. papers to Physics, Economics and Chemistry students.**

- SEC Papers **R software (Using project based presentations)**, *Transportation and Network flow*, $\LaTeX$, *Mathematica*, etc., to students from disciplines.
- VAC Paper **Vedic Mathematics-II**, to different disciplines.
- 2016-2018 **P.D.E, Practical Labs, etc**, Dayal Singh College.
- 2015–2017 **Real Analysis, Linear Algebra, etc**, Kirori Mal College.
- 2015 **Functional Analysis Tutorial classes to M.Sc students at**, Department of Mathematics, University of Delhi..

Mentoring Experience

Nagpaul Fellowship, Department of Mathematics, St. Stephen's College

In recent years, I have mentored students from different courses on a variety of mathematical topics. Some examples of their work are listed below:

- 2025–Present Currently mentoring two students in Game Theory on a survey-based project focusing on the allotment of students to courses.
- 2024–2025 Mentored two students in Regression Analysis, where they explored different types of regression models and examined their applications in everyday life.
- 2023–2024 Guided two students in studying the applications of Chaos Theory. Also, Mentored two additional students in exploring various data analysis techniques using R.
- 2022–2023 Supervised a group of students working on Fractional Calculus and Fractals, focusing on their mathematical properties and applications.
- 2021–2022 Guided two Economics students in studying macro and micro correlation factors in financial markets using statistical software tools.
- 2020–2021 Mentored two B.Sc.(Programme) students on applications of Graph Theory, including traffic systems and graph coloring problems. Also, supervised a group of students who conducted a study on COVID-19 using R software.
- 2019–2020 Mentored four students on Cryptography, focusing on the applications of Public Key Cryptosystems and Elliptic Curve Cryptography.

Computer skills

Softwares R, $\LaTeX$, Mathematica, Maxima, Excel.

Conference/Workshops

A few of attended workshops/conferences details are as follows:

- Workshop Enrichment workshop for college teachers (on new courses of UGCF under NEP-2020), 2025.
- Workshop Workshop on MS Excel (Basic to Advanced), Sept 2024.
- Refresher Course Refresher Course in Mathematics (Theme: Python and Vedic Mathematics), 2023.
- Conference International conference on Fractional Calculus, 2022.
- Workshop Statistical and ordinary differential equations in R, 2021.
- Refresher Course Online Two week Refresher Course in Mathematical Sciences, 2021.
- Conference International conference on special functions and applications, 2021.
- F.D.P. Two week Faculty Development course on Bio-Mathematics, 2020.
- Workshop International workshop on Wavelets Frames and Applications-II, 2014.

Talks Delivered

- Talk Delivered a talk on Transportation Problem along with the software training in the Workshop on Optimization and Game Theory on 11th April, 2023, at St. Stephen's College.
- Special I took some lectures on R software for B.A(H) Economics students in 2019, odd sem, at St. Stephen's College.
- Lectures

Academic & Administrative Responsibilities

- 2025–Present **Staff Advisor**, Computer Science Society.
- 2021–2025 **Staff Advisor**, Choreography Society.
- 2022–2023 **Committee Member**, *Criterion-6 (Governance, Leadership and Management)*, NAAC.
- 2022–Present **IQAC**, *Sub-committee Member of Criterion-6*.
- NIRF & Institutional Ranking/Survey Committees**, *Sub-committee member*, (India Today, The Week, Hansa, etc).
- College Level **College Elective Papers Committee**, *Admissions Team*, AQAR team member, etc.
- Department Level **Departmental Responsibilities**, *Mathematics (TT, IQAC, AQAR, etc)*.

Book Chapter Publication

- 2020 **Chapter 2: Statistical Analysis and Interpretation**, *A Textbook on Medical Diagnostics published by I.K. International Publishing House Pvt. Ltd., ISBN:978–93–85909–78–8.*

Referees

Prof. Dinesh Khattar

Professor, Principal,
Kirori Mal College,
University of Delhi, Delhi-07
✉ principal@kmc.du.ac.in

Prof. Lalit Kumar

Professor, Department of
Mathematics,
University of Delhi, Delhi-07
✉ lalit@maths.du.ac.in