



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

(Phone No. - 011-7121 9084 : Email - principal@kmc.du.ac.in)



Print Date : 14-04-2026

## 1. Personal Profile

Title: **Dr.** First Name: **SUMIT KUMAR** Last Name: **SHARMA**

Designation: **ASSISTANT PROFESSOR** Mobile No. -----

Phone No. (Office) **011-71219084** Phone No. (Residence): -----

Email: **sksharma@kmc.du.ac.in** Webpage: -----



Facebook: ----- Twitter: -----

LinkedIn: ----- Instagram: -----

Youtube: ----- Research Gate Link: <https://www.researchgate.net/profile/Sumit-Sharma-30>

Google Scholar Link: <https://scholar.google.co.in/citations?user=5y5RQpoAAAAJ&hl=en>

Address: **DEPARTMENT OF MATHEMATICS, KIRORI MAL COLLEGE, UNIVERSITY OF DELHI**

## 2. Educational Qualifications

Degree/ Certification	Institution	Year
M. Sc. (Mathematics)	Kirori Mal College, University of Delhi	2005
B.Sc. (Hons) Mathematics	Dyal Singh College, University of Delhi	2002

## 3. Career Profile & Administrative Assignments

Category	Role/ Designation	Department/ Committee	Date From - To	Remarks
ADMINISTRATIVE ASSIGNMENTS	CONVENER	PROSPECTUS COMMITTEE KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	COMMITTEE FOR COMMON COURSES KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	COORDINATING COMMITTEE FOR INFORMATION AND TECHNOLOGY KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	

ADMINISTRATIVE ASSIGNMENTS	MEMBER	FAPS – THE FINE ARTS & PHOTOGRAPHY SOCIETY KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	MUSOC – THE MUSIC SOCIETY KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	CONVENER	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - 13.Sep.2023	Convener at Helpdesk for Admissions
ADMINISTRATIVE ASSIGNMENTS	CONVENER	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2022 - 31.May.2023	Convener at Helpdesk for Admissions
ADMINISTRATIVE ASSIGNMENTS	ASSISTANT PROFESSOR	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - 30.Jun.2023	Deputy Superintendent Examination
ADMINISTRATIVE ASSIGNMENTS	ASSISTANT PROFESSOR	OTHERS KIRORI MAL COLLEGE, DELHI	01.Mar.2023 - 30.Apr.2023	Served as Deputy Superintendent Examination
ADMINISTRATIVE ASSIGNMENTS	OTHERS	KIRORI MAL COLLEGE KIRORI MAL COLLEGE, DELHI	01.Nov.2022 - 31.Dec.2022	Served as Deputy Superintendent Examination
ADMINISTRATIVE ASSIGNMENTS	ASSISTANT PROFESSOR	OTHERS KIRORI MAL COLLEGE, DELHI	01.Aug.2022 - 31.Jul.2022	Served as Joint Deputy Superintendent Examination
ADMINISTRATIVE ASSIGNMENTS	CONVENER	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2022 - 31.May.2023	Served as Convener (Technical committee), NAAC Steering Criterion Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2022 - 31.May.2023	Served as Member (SSR) at NAAC Criterion 3 Committee
ADMINISTRATIVE ASSIGNMENTS	CONVENER	OTHERS KIRORI MAL COLLEGE, DELHI	01.Jun.2023 - Till date	Served as Convener at Helpdesk for Admissions
ADMINISTRATIVE ASSIGNMENTS	CONVENER	PROSPECTUS COMMITTEE Kirori Mal College, University of Delhi	01.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	CONVENER	PROSPECTUS COMMITTEE Kirori Mal College	01.Jul.2024 - 30.Jun.2025	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	COORDINATING COMMITTEE FOR INFORMATION AND TECHNOLOGY Kirori Mal College	01.Jul.2024 - 30.Jun.2025	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	COMMITTEE FOR COMMON COURSES Kirori Mal College	01.Jul.2024 - 30.Jun.2025	

#### 4. Other Profiles

**Other Profile Name/ Description**

## AREAS OF INTEREST/ SPECIALIZATION

**Broad Area of Specialization:** Functional Analysis

- Frames in Quaternionic Hilbert Spaces
- Frames in Hilbert Spaces and Banach Spaces
- Gabor Frames.
- Bases in Banach Spaces

## AWARDS AND DISTINCTIONS

- Secured overall first rank in Graduation in the College.
- Qualified UGC-CSIR NET, December 2006.
- Cleared GATE-2007 (Mathematics) with AIR-114.
- Received scholarship in M.Sc. from National Board of Higher Mathematics (N.B.H.M.).

## OTHERS

- Reviewer for American Mathematical Society (AMS).
- Reviewer for Zentralblatt Fur Mathematik, Germany (zbMath).
- Referee for Filomat (Indexed in MathSciNet, zbMATH, SCIE(Impact Factor: 0.848), Scopus).
- Referee for Bulletin for Iranian Mathematical Society (Indexed in MathSciNet, zbMATH, SCIE(Impact Factor: 0.644), Scopus).
- Referee for Jordan Journal of Mathematics and Statistics (Indexed in MathSciNet, zbMATH, ESCI, Scopus).
- Referee for Poincare Journal of Analysis and Applications (Indexed in MathSciNet, zbMATH, , Scopus).

## MEMBERSHIPS IN ACADEMIC/ PROFESSIONAL BODIES

- Member of American Mathematical Society.
- Life time member of Society for History of Mathematics, India.
- Life time member of Ramanujan Mathematical Society, India.

## MOOCS/ SWAYAM-NPTEL/ OTHER ONLINE COURSES COMPLETED WITH CERTIFICATION

Successfully completed the following online non-credit courses authorized by Johns Hopkins University and offered through Coursera:

1. The Data Scientist's Toolbox
2. R Programming
3. Getting and Cleaning data
4. Exploratory Data Analysis
5. Reproducible Research
6. Statistical Inference

## WORKSHOP/ SEMINAR/ CONFERENCE/ WEBINAR ORGANIZED

- Chaired a session with Prof. Akram Aldroubi and Prof. Shiv K. Kaushik on “Frames, nonlinear approximations and Hilbert transform” in the 12th biennial International Conference on Sampling Theory and Applications (SampTA 2017), held at Tallinn, Estonia, July 3<sup>rd</sup>, 2017. (<https://sampta2017.ee/sessions/>)
- Organized mini courses for PG/ Ph.D. Students on Bases and Frames in finite dimensional Spaces and Frames in Hilbert Spaces and their properties, in International Workshop on Wavelets, Frames and Applications held at Kirori Mal College, University of Delhi, Delhi, 14-20 December, 2017.
- Member, Organizing Committee, International Workshop on Wavelets, Frames and Applications held at Kirori Mal College, University of Delhi, Delhi, 14-20 December, 2017.
- Member, Organizing Committee, International Workshop on Wavelets, Frames and Applications held at Kirori Mal College, University of Delhi, Delhi, 24-30 December, 2014.
- Member, Organizing Committee, International Workshop on Wavelets, Frames and Applications held at Kirori Mal College, University of Delhi, Delhi, 14-20 December, 2011.

## CONTRIBUTION TOWARDS DEVELOPMENT OF E-CONTENTS/ MOOCS

- S.K. Sharma, Green's Theorem, Stroke's Theorem and Gauss's Theorem, Institute of Life Long Learning, University of Delhi, Delhi. (ISBN 978-93-86264-04-6).
- S.K. Sharma and B. Semthanga, Line Integrals, Institute of Life Long Learning, University of Delhi, Delhi. (ISBN 978-93-86264-04-6).
- S.K. Sharma , Group Action, Institute of Life Long Learning, University of Delhi, Delhi. (ISBN 987-93-86264-06-0).
- S.K. Sharma , Normal Operators, Institute of Life Long Learning, University of Delhi, Delhi. (ISBN 987-93-86264-06-0).

## 5. Research Guidance

Year	Guide For	Title of the Dissertation/ Thesis	Scholar Name	Status
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## 6. Research Projects

Year	Title of Project	Sponsorship Agency	Duration	Amount Sanctioned	Date of Sanction
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## 7. Publications

Category	Publication Name	Title	Name of Author	Reference Link/ DOI Link
JOURNAL PAPER (National)	Woven K-Frames in quaternionic Hilbert spaces	Poincare Journal of Analysis & Applications	Nitin Sharma, S.K.Sharma, Khole Timothy Poumai (Corresponding Author)	10.46753/pjaa.2022.v09i02.016

JOURNAL PAPER (International)	A Note on G-frame Sequences,	International Jour. of Pure and Applied Mathematics	Renu Chugh, S.K. Sharma and Shashank Goel (Corresponding Author)	
JOURNAL PAPER (International)	On Approximative Atomic Decompositions in Banach Spaces	Jour. of Applied Functional Analysis	S.K. Kaushik and S.K. Sharma (Joint Author)	
JOURNAL PAPER (International)	Atomic Decomposition Satisfying Certain Properties	Jour. of Advanced Research in Pure Mathematics	S.K. Kaushik and S.K. Sharma (Joint Author)	
JOURNAL PAPER (International)	On A Generalizations of Atomic Decompositions	Albanian Journal of Mathematics	S.K. Kaushik and S.K. Sharma (Joint Author)	10.51286/albjm/1300194339
JOURNAL PAPER (International)	On Schauder Frames in Conjugate Banach Spaces	Journal of Mathematics	S.K. Kaushik, S.K. Sharma and Khole Timothy Poumai (Joint Author)	doi:10.1155/2013/318659
JOURNAL PAPER (International)	Some Results Concerning Frames Associate with Measurable Spaces	TWMS Journal of Pure and Applied Mathematics	S.K. Kaushik, L.K. Vashisht and S.K. Sharma (Joint Author)	
JOURNAL PAPER (International)	On Approximative Frames in Hilbert Spaces	Palestine Journal of Mathematics	S.K. Sharma, A. Zothansanga and S.K. Kaushik (First Author)	
JOURNAL PAPER (International)	On block transfinite sequences in Banach Spaces	Poincare Journal of Analysis and Applications	G. Singh and S.K. Sharma (Corresponding Author)	10.46753/pjaa.2014.v01i02.004
JOURNAL PAPER (International)	Block Sequences and g-frames	International Journal of Wavelets, Multiresolution and Image Processing	Renu Chugh, S.K. Sharma and Shashank Goel (Joint Author)	

JOURNAL PAPER (International)	Trace-class operators via OPV-frames	Filomat	Ruchi Bhardwaj, S.K.Sharma, S.K.Kaushik (Joint Author)	
JOURNAL PAPER (International)	Woven Frames in quaternionic Hilbert spaces	Journal of Mathematics	S.K.Sharma, Nitin Sharma, Khole Timothy Poumai (First Author)	
JOURNAL PAPER (International)	A Note on Retro Banach Frames	International Jour. of Pure and Applied Mathematics	Raj Kumar and Sumit K. Sharma (Joint Author)	
JOURNAL PAPER (International)	Frames in quaternionic Hilbert spaces	Journal of Mathematical Physics Analysis Geometry	S.K.Sharma and Shashank Goel (First Author)	<a href="https://doi.org/10.15407/mag15.03.395">https://doi.org/10.15407/mag15.03.395</a>
JOURNAL PAPER (International)	On frames in finite dimensional Quaternionic Hilbert spaces	Palestine Journal of Mathematics	S.K. Sharma, Virender, G. Singh and Soniya Sahu (First Author)	
JOURNAL PAPER (International)	Duals of a frames in Quaternionic Hilbert spaces	Poincare Journal of Analysis & Applications	S.K. Sharma, G. Singh and Soniya Sahu (First Author)	
JOURNAL PAPER (International)	On Unconditional Atomic Decompositions in Banach Spaces	Journal of Applied functional analysis	S.K. Kaushik and S.K. Sharma (Joint Author)	
JOURNAL PAPER (International)	A NOTE ON GENERALIZED FRAME POTENTIAL	Jordan Journal of Mathematics and Statistics (JJMS)	S. K. SHARMA AND VIRENDER (First Author)	<a href="https://doi.org/10.47013/15.2.13">https://doi.org/10.47013/15.2.13</a>
JOURNAL PAPER (International)	ON WEAVING PG-FRAMES	Palestine Journal of Mathematics	S.K. Sharma, Shashank Goel and S.K. Kaushik (First Author)	
JOURNAL PAPER (National)	Dual Frames on Finite Dimensional Quaternionic Hilbert Space	Poincare Journal of Analysis and Applications	S.K. Sharma and Virender (First Author)	10.46753/pjaa.2016.v03i02.004

JOURNAL PAPER (National)	On block transfinite sequences in Banach Spaces	Poincare Journal of Analysis and Applications	G. Singh and S.K. Sharma (Corresponding Author)	10.46753/pjaa.2014.v01i02.004
JOURNAL PAPER (National)	On Approximative Atomic Decompositions in Banach Spaces	Comm. Math. Appl.	S.K. Kaushik and S.K. Sharma (Joint Author)	<a href="https://doi.org/10.26713/cma.v3i3.213">https://doi.org/10.26713/cma.v3i3.213</a>
JOURNAL PAPER (International)	ON FUSION FRAMES IN QUATERNIONIC HILBERT SPACES	Palestine Journal of Mathematics	S.K. Sharma, Nitin Sharma and Khole Timothy Poumai (First Author)	<a href="https://pjm.ppu.edu/sites/default/files/papers/PJM_12%284%29_2024.pdf">https://pjm.ppu.edu/sites/default/files/papers/PJM_12%284%29_2024.pdf</a>
JOURNAL PAPER (International)	DUALITY AND STABILITY OF OPERATOR VALUED FRAMES FOR QUATERNIONIC HILBERT SPACES	Journal of Classical Analysis	RUCHI BHARDWAJ AND S. K.SHARMA (Corresponding Author)	doi:10.7153/jca-2024-24-07
JOURNAL PAPER (International)	Dynamical sampling in quaternionic Hilbert spaces	São Paulo Journal of Mathematical Sciences	Ruchi Bhardwaj, Raksha Sharma, S. K. Sharma (Joint Author)	<a href="https://doi.org/10.1007/s40863-025-00496-1">https://doi.org/10.1007/s40863-025-00496-1</a>
JOURNAL PAPER (International)	A note on Riesz bases in the framework of quaternionic Hilbert space	Poincare J. Anal. Appl.	S. K. Sharma, Virender, S>K. Kaushik (First Author)	DOI: 10.46753/pjaa.2024.v011i01.007
CONFERENCE PAPER/ PROCEEDINGS (National)	On Finitely Decomposable Frames	Proceedings of Third National Conference on Mathematical techniques: Emerging Paradigms for Electronics and IT Industries	Renu Chugh, S.K. Sharma and Shashank Goel (Corresponding Author)	

CONFERENCE PAPER/ PROCEEDINGS (National)	On Similar Atomic Decompositions	Proceedings of Third National Conference on Mathematical techniques: Emerging Paradigms for Electronics and IT Industries	S.K. Kaushik and S.K. Sharma (Corresponding Author)	
CHAPTER (National)	A Review of Mathematical part of Astrology/ ?????? ?????? ??????? ??????? ??????? ???????	?????? ??????? ?? ( ??????, ?? ??????, 2023)	Sumit Kumar Sharma (Sole Author)	
RESEARCH PAPERS (International)	A note on Riesz bases in the framework of quaternionic Hilbert space	Poincare J. Anal. Appl.	S.K. Sharma, Virender, and S.K. Kaushik (First Author)	10.46753/pjaa.2024.v011i01.007
RESEARCH PAPERS (International)	Some results on woven frames in quaternionic Hilbert spaces	Bull. Math. Anal. Appl.	Nitin Sharma, B. Semthanga, Dolly Jain, S.K. Sharma (Joint Author)	<a href="https://doi.org/10.54671/BMAA-2024-4-1">https://doi.org/10.54671/BMAA-2024-4-1</a>
RESEARCH PAPERS (International)	Frames as operator orbits for quaternionic Hilbert spaces	Jordan J. Math. Stat.	Ruchi Bhardwaj, S. K. Sharma, S. K. Kaushik (Corresponding Author)	DOI: <a href="https://doi.org/10.47013/17.3.5">https://doi.org/10.47013/17.3.5</a>

<b>8. Books</b>				
Category	Book Name	Title	Name of Author	ISSN/ ISBN Number
BOOK (International)	Mathematics: A Text book for Grade 10 for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-16-3
BOOK (International)	Mathematics: A Text book for Grade 11 for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-26-2
BOOK (International)	Mathematics: A Text book for Grade 12 Part I for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-36-1

BOOK (International)	Mathematics: A Text book for Grade 12 Part II for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-55-2
BOOK (International)	Mathematics: A Teacher guide for Grade 10 for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-17-0
BOOK (International)	Mathematics: A Teacher guide for Grade 11 for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-27-9
BOOK (International)	Mathematics: A Teacher guide for Grade 12 for Ministry of Education, Monrovia, Republic of Liberia	Sumit Kumar Sharma and Gitanjali (First Author)	International Star Educational Books Distributors (P) Ltd. India	978-93-95626-37-8
BOOK (National)	An Introduction to Linear Algebra (for Beginners)	S.K. Kaushik, S.K. Sharma, Virender, Varinder Kumar (Joint Author)	Imprint Books	978-81-932671-0-3
BOOK (National)	Business Research Methods	Pushpender Kumar, Anupreet Kaur, and Sumit Kumar Sharma (Joint Author)	Taxmann Publications Pvt. Ltd.	9789371267069

## 9. Faculty Achievements

Year	Category of Achievement	Role	National/ International etc.	Name	Date From- To
2024	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PAPER PRESENTER	International	XIV International Conference of the Georgian Mathematical Union, Batumi Shota Rustaveli State University in Batumi, Georgia	02.Sep.2024 - 07.Sep.2024
2024	WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED	PAPER PRESENTER	International	International Conference: Recent Trends in Mathematics ICM-SQU2024, Sultan Qaboos University, Muscat, Oman	04.Mar.2024 - 06.Mar.2024
2024	FACULTY DEVELOPMENT PROGRAM ATTENDED	PARTICIPANT	National	NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC)	07.May.2024 - 16.May.2024
2023	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PAPER PRESENTER	International	10th International Congress of Fundamental and Applied Sciences, Fatih Sultan Vakif University, Istanbul, Turkey	04.Jun.2023 - 06.Jun.2023
2022	FACULTY INDUCTION PROGRAM ATTENDED	PARTICIPANT	College	Faculty in Universities/Colleges/Institutes of Higher Education	20.Sep.2022 - 19.Oct.2022

2022	FACULTY DEVELOPMENT PROGRAM ATTENDED	PARTICIPANT	College	Environmental Sciences and Public Health	01.Feb.2022 - 02.Feb.2022
2022	REFRESHER COURSE ATTENDED	PARTICIPANT	College	"Managing Online Classes & Co- creating MOOCS 21.0"	07.Dec.2022 - 22.Dec.2022
2021	REFRESHER COURSE ATTENDED	PARTICIPANT	College	Two - Week Refresher Course/Faculty Development Programme on "Managing Online Classes & Co- creating MOOCS 8.0"	04.Sep.2021 - 18.Sep.2021
2019	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PARTICIPANT	International	8th International Eurasian Conference on Mathematical Sciences and Applications, Bake State University, Baku, Azerbaijan	27.Aug.2019 - 30.Aug.2019
2017	WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED	ORGANIZER	International	12th biennial International Conference on Sampling Theory and Applications (SampTA 2017), held at Tallinn, Estonia, July 3-7, 2017.	03.Jul.2017 - 07.Jul.2017
2013	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PAPER PRESENTER	International	International Conference on Approximation and Optimization held at PUAP, Puebla, Mexico, 13-18 October, 2013.	13.Oct.2013 - 18.Oct.2013

**Dr. SUMIT KUMAR SHARMA**