



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

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## 1. Personal Profile

Title: **Prof.** First Name: **SHIV** Last Name: **KUMAR KAUSHIK**

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

Phone No. (Office) **9810821498** Phone No. (Residence): -----

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

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

Youtube: ----- Research Gate Link: -----

Google Scholar Link: -----

Address: -----



## 2. Educational Qualifications

Degree/ Certification	Institution	Year
Ph. D.	Department of Mathematics, University of Delhi	1991

## 3. Career Profile & Administrative Assignments

Category	Role/ Designation	Department/ Committee	Date From - To	Remarks
CAREER PROFILE	PROFESSOR	MATHEMATICS KIRORI MAL COLLEGE, DELHI	18.Jul.2018 - Till date	

## 4. Other Profiles

Other Profile Name/ Description

**AREAS OF INTEREST/ SPECIALIZATION**

Theory of Bases

Theory of Wavelets

Theory of Frames

**OTHERS**

Vice Principal from 06.01.2021 to 05.01.2023

**5. Research Guidance**

Year	Guide For	Title of the Dissertation/ Thesis	Scholar Name	Status
2012	Ph. D.	A Study of Atomic Decompositions in Banach Spaces	Sumit Kumar Sharma	Awarded
2012	Ph. D.	On Fusion Frames in Banach Spaces	Varinder Kumar	Awarded
2009	Ph. D.	VA STUDY OF GABOR FRAMES AND RELATED CONCEPTS IN BANACH SPACES	Virender	Awarded
2016	Ph. D.	NONLINEAR APPROXIMATIONS AND FRAMES IN BANACH SPACES	Khole Timothy Poumai	Awarded
2015	Ph. D.	CERTAIN TYPES OF FRAMES IN BANACH SPACES	Shalu Sharma	Awarded
2013	Ph. D.	FRAMES AND RELATED CONCEPTS IN BANACH SPACES	SHASHANK GOEL	Awarded
2025	Ph. D.	FRAMES AND ALLIED CONCEPTS IN BANACH SPACES	Sandeep Kumari	Awarded

**6. Research Projects**

Year	Title of Project	Sponsorship Agency	Duration	Amount Sanctioned	Date of Sanction
2018	Applications of Frames and Wavelets in Quantum Information Theory	SERB-DST	3 years	660000	28.May.2018

**7. Publications**

Category	Publication Name	Title	Name of Author	Reference Link/ DOI Link	Publication (Month-Year)
JOURNAL PAPER (International)	Finite Gabor systems and uncertainty principle for block sliding discrete Fourier transform	Filomat	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K (Joint Author)		August 2023

JOURNAL PAPER (International)	On generalized analytic wavelets	Iranian Journal of Science	Zothansanga, A., Khanna, N., Kaushik, S.K.; Kumar Dilip (Joint Author)		February 2023
JOURNAL PAPER (International)	Reconstruction of multidimensional digital signals	Int. J. Wavelets Multiresolut. Inf. Process	Mantry, Poonam; Poumai, Khole Timothy; Kaushik, S. K. (Corresponding Author)		January 2023
JOURNAL PAPER (International)	Trace class operators via OPV-frames	Filomat	Bhardwaj, Ruchi; Sharma, S. K.; Kaushik, S. K. (Corresponding Author)		December 2021
JOURNAL PAPER (International)	On optimal estimate of the block orthogonal greedy algorithm for g-frames	Numer. Funct. Anal. Optim.	Poumai, Khole Timothy; Deep, Sunder; Kaushik, S. K. (Corresponding Author)		August 2021
JOURNAL PAPER (International)	Periodized wavelet packets on bounded subsets of $\mathbb{R}$	J. Contemp. Math. Anal.	Khanna, N.; Kaushik, S. K.; Pap, M. (Corresponding Author)		September 2021
JOURNAL PAPER (International)	An interplay between parameter $(p,q)$ -Boas transform and linear canonical transform	J. Pseudo-Differ. Oper. Appl.	Khanna, Nikhil; Kaushik, S. K.; Djordjević, Slaviša V. (Joint Author)		August 2021
JOURNAL PAPER (International)	An improved one point quadrature formula	Numer. Funct. Anal. Optim.	Khanna, Nikhil; Arredondo, Juan H.; Kathuria, Leena; Kaushik, S. K. (Joint Author)		February 2021
JOURNAL PAPER (International)	Some properties of fractional Boas transforms of wavelets.	J. Math.	Khanna, Nikhil; Zothansanga, A.; Kaushik, S. K.; Kumar, Dilip (Joint Author)		March 2021
JOURNAL PAPER (International)	On metric controlled operator-valued frames and their applications	J. Math. Physics	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K (Joint Author)		May 2024
JOURNAL PAPER (International)	On generalized analytic wavelets	Iran Journal of Science	Zothansanga, A.; Khanna, Nikhil; Kaushik, S. K.; Kumar, Dilip (Joint Author)		February 2024
JOURNAL PAPER (International)	Finite Gabor systems and uncertainty principle for block sliding discrete Fourier transform	Filomat	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K (Joint Author)		August 2023

JOURNAL PAPER (International)	On metric controlled operator-valued frames and their applications	J. Math. Physics	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K. (Joint Author)	10.1063/5.0092633	May 2024
JOURNAL PAPER (International)	Further singular value and norm inequalities for matrices	Positivity	Al-Natoor, Ahmad; Kaushik, S. K.; Kittaneh, Fuad; Kumar, Amit (Joint Author)	10.1007/s11117-025-01126-y	May 2025
JOURNAL PAPER (International)	On metric controlled operator-valued frames and their applications	J. Math. Physics	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K. (Joint Author)		May 2024
JOURNAL PAPER (National)	A note on Riesz bases in the framework of quaternionic Hilbert space	Poincare Journal of Analysis and Applications	Sharma, S. K.; Virender; Kaushik, S. K. (Joint Author)		July 2024
JOURNAL PAPER (International)	Analysis of finite Haar wavelet transform and its implementation	Math. Methods Appl. Sci.	Poumai, Khole Timothy; Khanna, Nikhil; Kaushik, S. K. (Joint Author)		June 2024
JOURNAL PAPER (International)	Frames as operator orbits for quaternionic Hilbert spaces	Jordan J. Math. Stat	Bhardwaj, Ruchi; Sharma, S. K.; Kaushik, S. K. (Joint Author)		September 2024
JOURNAL PAPER (International)	Toeplitz O-frames for operators in Banach spaces	Anal. Theory Appl	Shekhar, Chander; Kaushik, S. K. (Corresponding Author)		December 2024
JOURNAL PAPER (International)	Further singular value and norm inequalities for matrices	Positivity	Al-Natoor, Ahmad; Kaushik, S. K.; Kittaneh, Fuad; Kumar, Amit (Joint Author)		May 2025

## 8. Books

Category	Book Name	Title	Name of Author	ISSN/ ISBN Number
BOOK (National)	An Introduction to Linear Algebra	Sumit Kumar Kaushik, Sumit Kumar Kaushik, Varinder Kumar and Virender (Joint Author)	Imprint Books	978-81-932671-0-3
BOOK (National)	An Introduction to Real Analysis	Pawan K. Jain and Shiv K. Kaushik (Joint Author)	S.Chand & Co. Ltd.	81-219-2007-8

## 9. Faculty Achievements

<b>Year</b>	<b>Category of Achievement</b>	<b>Role</b>	<b>National/ International etc.</b>	<b>Name</b>	<b>Date From- To</b>
2017	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PROFESSOR	International	International Conference on Mathematics and its Applications	04.Sep.2017 - 08.Sep.2017

**Prof. SHIV KUMAR KAUSHIK**