



Faculty Details Proforma



| Title | Dr. | First Name | Varinder | Last Name | Kumar | Photograph |
|---|-----|--|----------|-----------|-------|---|
| Designation | | Associate Professor | | | |  |
| Address | | A-88, Sudershan Park, New Delhi 110015. | | | | |
| Date of Birth | | 26.07.1981 | | | | |
| Phone No Office | | 01129250306 | | | | |
| Mobile | | 9868361939 | | | | |
| Email | | varinder.kumar@sbs.du.ac.in ; varinder1729@gmail.com | | | | |
| Web-Page | | | | | | |
| Educational Qualifications | | | | | | |
| Degree | | Institution | | | Year | |
| B.Sc.(H) Mathematics | | Kirori Mal College, University of Delhi | | | 2003 | |
| M.Sc. Mathematics | | Kirori Mal College, University of Delhi | | | 2005 | |
| Ph.D. | | Department of Mathematics, University of Delhi | | | 2011 | |
| GATE | | IIT Kanpur | | | 2007 | |
| Career Profile | | | | | | |
| <ul style="list-style-type: none">Working as Associate Professor in the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi from 11.07.2021 – till date.Worked as Assistant Professor in the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi from 25.01.2011 – 10.07.2021.Worked as Fellow in Mathematics, Institute of Lifelong Learning, University of Delhi from 13/01/2015-12/01/2017 (On Deputation).Worked as Assistant Professor (Temp.) in St. Stephen's College, University of Delhi, Delhi-110007 from 03.08.2010 to 24.01.2011.Worked as LECTURER (Ad-hoc) in Deen Dayal Upadhyaya College, Shivaji Marg, Karam Pura, New Delhi – 110015 from 16.07.2009 to 17.02.2010 (7 months).Worked as LECTURER (Ad-hoc) in Deen Dayal Upadhyaya College, Shivaji Marg, Karam Pura, New Delhi – 110015 from 03.11.2008 to 23.04.2009 (5 months and 20 days). | | | | | | |

- Worked as Research Scholar (**JRF** 01.07.2006-30.06.2008 & then **SRF** 01.07.2008 – 30.06.2009) in the Department of Mathematics, University of Delhi from September 2005- September 2011.

Areas of Interest / Specialization

Functional Analysis, Theory of Frames, Wavelet Analysis

Papers Taught

Group Theory I, Group Theory II, Discrete Mathematics, Linear Algebra, Numerical Methods, Analysis I, Analysis II, Number Theory, Ring Theory and Linear Algebra I, Ring Theory and Linear Algebra II, Mathematical Finance

Research Guidance

- **Ph.D:** **Two** research scholars have been **awarded** and **Two** students are pursuing their PhD degree from the Department of Mathematics, University of Delhi.
- **M.Phil:** **One** research scholar has been **awarded** his M.Phil. degree and one student is pursuing from the Department of Mathematics, University of Delhi.

Publications Profile

1. *On Cones Associated with Schauder Frames*, Jordan Journal of Mathematics and Statistics (JJMS) 10(4), **2017**, 265 – 280. (with Shah Jahan). **P-ISSN 2075 -7905, E-ISSN 2227-5487.**
2. *Cone associated with frames in Banach Spaces*, Palestine Journal of Mathematics, Vol. 7(2)(**2018**) , 641–649 (with Chander Shekhar and Shah Jahan). **ISSN: 2219-5688.**
3. *Some results on the existence of frames in Banach spaces*, Poincare Journal of Analysis and Applications, **2018**, 25-33 (with Shah Jahan). ISSN: **2349-6789** (print), **2349-6797** (online).
4. *Vanishing moments of wavelet packets and wavelets associated with Riesz projectors*, in Proceedings of International Conference on Sampling Theory and Applications **2017 (SampTA-2017)**, 222-226 (with Nikhil Khanna and S.K. Kaushik).
Electronic ISBN: 978-1-5386-1565-2 USB ISBN: 978-1-5386-1564-5 Print on Demand(PoD) ISBN: 978-1-5386-1566-9. DOI: [10.1109/SAMPTA.2017.8024358](https://doi.org/10.1109/SAMPTA.2017.8024358)
5. *Wavelet packets and their vanishing moments*, Poincare Journal of Analysis and Applications, **2017**, 95-105 (with Nikhil khanna and S. K. Kaushik). ISSN: **2349-6789** (print), **2349-6797** (online).
6. *On the existence of non-linear frames*, Archivum Mathematicum, Vol. 53 (**2017**),

- No. 2, 101–109. (with Shah Jahan and S.K. Kaushik).
ISSN 1212-5059 (electronic edition) **ISSN 0044-8753** (printed edition)
7. ***Wavelet Packet Approximation***, Integral Transforms and Special Functions, Vol. 27 No. 9, (2016), 698 – 714. ISSN: **1065-2469** (Print), **1476-8291** (Online). (with Nikhil Khanna and S.K. Kaushik).
 8. ***Vanishing Moments of Hilbert Transforms of Wavelets***, Poincare J. Anal. Appl., **2015**(2) Special Issue (IWWFA II, Delhi), 115-127. ISSN: **23496789** (print), **2349-6797** (online). (with Nikhil Khanna and S.K. Kaushik).
 9. ***Approximations using Hilbert Transform of Wavelets***, J. Classical Anal., **Vol. 7(2)**, (2015), 83–91, ISSN: **1848-5979** (print), **1848-5987** (online), (with Nikhil Khanna and S.K. Kaushik).
 10. ***Frame of Subspaces for Banach Spaces***, International Journal of Wavelets, Multiresolution and Information Processing (IJWMIP) (World Scientific), **8** (2) (2010), 243- 252. **Print ISSN: 0219-6913 Online ISSN: 1793-690X.** (with S.K. Kaushik)
 11. ***A Note on Fusion Banach Frames***, Archivum Mathematicum (Brno), Tomus **46** (2010), 145–151. **ISSN 1212-5059** (electronic edition) **ISSN 0044-8753** (printed edition). (with S.K. Kaushik)
 12. ***A Note on AD-Frames in Banach Spaces***, in Proc Third National Conference on Mathematical techniques: Emerging Paradigms for Electronics and IT Industries, **2010**, pp TS 3.5.1--3.5.6. (with S.K. Kaushik)
 13. ***On Fusion Frames in Banach Spaces***, Georgian Mathematical Journal, Vol 18, No 1, **2011**, 121-130. **Online ISSN 1572-9176** (with S.K. Kaushik).
 14. ***AD-Frames satisfying property B***, Communications in Mathematics and Applications (Special Issue), Vol 3, No 3, **2012**, 303-312. **ISSN 0975-8607 (Online); 0976-5905 (Print)** (with S.K. Kaushik)

Conference/ workshop Organized

- **Convener of International Conference on Applicable Analysis (ICAA 2017)** organized by Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi at Satyakam Bhawan, New Social Sciences Block, North Campus during **08th - 11th February, 2017**.
- **Convener** a capacity building workshop on e-content creation in Mathematics on **28.10.2016** held at the Institute of Life Long Learning, University of Delhi.
- Participated and **Member, Organising Team of 9th International Geographical Union (IGU) Conference Land Use Change, Climate Extremes and Disaster Risk Reduction**, organized by Shaheed Bhagat Singh College, University of Delhi, Delhi during **18th -20th March 2016**..

- **Convened** a capacity building workshop on e-content creation in Mathematics on **29.01.2016** held at the Institute of Life Long Learning, University of Delhi.
- **Convener** of Accomodation Committee in **International Workshop on Wavelets, Frames and Applications II** held at Kirori Mal College, University of Delhi, **24.12.2014 – 30.12.2014**.

Awards and Distinctions

Association With Professional Bodies

Life time member of **Indian Society for History of Mathematics**

Other Activities

- Participated in One week (online) **International Faculty Development Programme on Advanced Linear Algebra** organized by Miranda House College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi during **27th September-1st October, 2021**.
- Chaired a Technical session in **International Virtual Conference on Recent Applications of Mathematical Sciences** organized by Department of Mathematics and Statistics, University College of Science, Mohanlal Sukhadia University, Udaipur, Rajasthan **during 15-16 July, 2021**.
- Participated in One week (online) **Interdisciplinary Faculty Development Programme on Applications of Mathematics in Business and Social Sciences** organized by Department of Mathematics and IQAC, Miranda House College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi during **18th -24th March, 2021**.
- Participated in the Two week Faculty Development Programme on **ICT Based New Paradigms of e-Teaching and e-Learning: Digital Pedagogy** organized by the Department of Computer Science, Mata Sundri College for Women, University of Delhi and the Teaching Learning Centre, Ramanujan College, University of Delhi from **15-30 September, 2020**.

- **Centre Co-ordinator, Madhava Mathematics Competition (MMC)** in the college for the exam held in the year **2019**.
- Participated in the Two week Faculty Development Programme on **Teaching and Learning in Digital Era** organized by the Teaching Learning Centre, Ramanujan College, University of Delhi and Internal Quality Assurance Cell (IQAC), Shaheed Bhagat Singh College, University of Delhi from **15-27 December, 2018**.
- Participated and chaired a session at the **International Workshop on Wavelets, Frames & Applications-III** held at Kirori Mal College, University of Delhi during **14-20, December, 2017**.
- Participated in three-week Refresher Course in **E-Learning and Digital Learning (ID)** from **5th September-25th September, 2017** organised by Centre for Professional Development in Higher Education (CPDHE), University of Delhi, Delhi.
- Convener of **International Conference on Applicable Analysis (ICAA 2017)** organized by Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi at Satyakam Bhawan, New Social Sciences Block, North Campus during **08th - 11th February, 2017**.
- Delivered an **invited talk** in connection with **In-service course of PGT (Maths), 2nd spell, 2016-17 on 31.12.2016 at Kendriya Vidyalaya No. 1, Delhi Cantt, New Delhi-110010**.
- **Convended** a capacity building workshop on e-content creation in Mathematics on **28.10.2016** held at the Institute of Life Long Learning, University of Delhi.
- Participated and **Member, Organising Team** of **9th International Geographical Union (IGU) Conference Land Use Change, Climate Extremes and Disaster Risk Reduction**, organized by Shaheed Bhagat Singh College, University of Delhi, Delhi during **18th -20th March 2016**.
- Participated and delivered an **invited talk** entitled “Fusion Frames and Related Concepts in Banach Spaces” and **chaired a session** in **NATIONAL WORKSHOP ON ANALYSIS, DIFFERENTIAL EQUATIONS AND APPLICATIONS** held at Mohan Lal Sukhadia University, Udaipur during **25th – 27th February, 2016**.

- **Convened** a capacity building workshop on e-content creation in Mathematics on **29.01.2016** held at the Institute of Life Long Learning, University of Delhi.
- Convener of Accomodation Committee in **International Workshop on Wavelets, Frames and Applications II** held at Kirori Mal College, University of Delhi, **24.12.2014 – 30.12.2014**.
- Participated and delivered an **invited talk** entitled “*On Fusion Frames in Banach Spaces II*” and **chaired a session** in **International Workshop on Wavelets, Frames and Applications II** held at Kirori Mal College, University of Delhi, **24.12.2014 – 30.12.2014**.
- Participated in **International Seminar on History of Mathematics** held at Ramjas College during **19-20 November, 2013**.
- Participated in the **105th four-week Orientation Programme** organized by the UGC-ASC, Jamia Millia Islamia, New Delhi from **15th July – 14th August, 2013**.
- Presented a poster entitled “Fusion Banach Frames satisfying property *B*” in **Almora Mathematical Surveys** held at Kasar Jungle Resort, Kumaun University, Almora during 03-06 October 2012.
- Convener of Transport Committee in **International Workshop on Wavelets, Frames and Applications** held at Kirori Mal College, University of Delhi, 15.12.2011 – 21.12.2011.
- Participated and presented a paper entitled “*AD-Frames satisfying property B*” in **International Workshop on Wavelets, Frames and Applications** held at Kirori Mal College, University of Delhi, 15.12.2011 – 21.12.2011.
- Participated and presented a paper entitled “*A Note on AD-Frames in Banach Spaces*” in **Third National Conference on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries (MATEIT 2010)** held during 30-31 January, 2010 in New Convention Centre, University of Delhi.
- Participated in Pre – ICM **International Convention on Mathematics** 18th – 20th December, 2008 held at University of Delhi.

- Participated in **International Conference on Operator Theory and Related Areas** 9th – 12th January, 2008 held at University of Delhi.
- Participated in **Instructional Workshop on Wavelet Analysis** 22nd Oct. – 5th Nov. 2007 held at B.H.U.
- Participated in **National Workshop on Analysis** 27-28 September, 2007 held at University of Delhi.
- Participated in **Annual Foundation School – II** 1st – 28th June, 2006 held at Bhaskaracharya Pratisthana, Pune.