

# Lav Kumar Singh, Ph.D.

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 www.researchgate.net/profile/Lav-Kumar-Singh  
[https://arxiv.org/a/kumar\\_l\\_2.html](https://arxiv.org/a/kumar_l_2.html)



## Employment History

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| 01.04.2025-present      |  <b>Assistant with a doctoral degree (Post-doctoral)</b> , Institute of Mathematics, Physics and Mechanics (IMFM), Ljubljana (Slovenia). |
| 01.07.2024 – 31.03.2025 |  <b>Assistant Professor</b> , Madhav Institute of Technology and Science- Gwalior (M.P) India.   |
| 13.03.2023 – 30.06.2024 |  <b>Post-Doc Fellow</b> , Indian Institute of Science Education and Research, Bhopal (M.P).  |
| 23.12.2022 – 28.02.2023 |  <b>Research Associate</b> , Indian Institute of Technology, Hyderabad (Telangana).  |
| 25.07.2022 – 24.10.2022 |  <b>Research Associate</b> , Indian Institute of Technology, Gandhinagar (Gujrat).   |

## Education

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|-------------|---|
| 2017 – 2022 |  <b>Ph.D, Jawaharlal Nehru University</b><br>Thesis title: <i>On Arens Regularity of the projective tensor product of Schatten spaces.</i> |
| 2014 – 2016 |  <b>M.Sc. Mathematics, Dr. Harisingh Gour Central University, Sagar (M.P) .</b><br>Grades (Percentage): 60%                                |
| 2009 – 2012 |  <b>B.Sc. Honors Mathematics, Banaras Hindu University, Varanasi .</b><br>CGPA: 6.10   |

## Research Publications

-  L.K Singh, **Upper bound for the covering index of Schatten spaces**, Preprint.
-  L.K Singh, A. Peperko **Sherman-Takeda type theorems for locally  $C^*$ -algebras**, Arxiv.
-  L.K Singh, A. Peperko, **Some Frechet spaces associated to Young functions satisfying Mulholland's inequality**. To appear in Filomat.
-  L.K Singh, **Geometry of a Banach algebra  $\mathcal{A}$  and the bidual of  $L^1(G, \mathcal{A})$** , Journal of mathematical analysis and applications, Volume 533, Issue 1, 128056. 2024.
-  L.K Singh, **Annihilators in the bidual of generalized group algebras**, Complex analysis and operator theory. Vol. 18, 68, 2024
-  V.P Gupta, L.K Singh, **On strong Arens irregularity of the projective tensor product of Hilbert-Schmidt spaces**, Houston J. Math., Vol 48-2, 337-351. 2022.
-  L.K Singh, **On Arens regularity of projective tensor products of Schatten spaces**, Rocky Mount. J. Math. Vol. 51, issue 4, 1433-1441. 2021.
-  L.K Singh, A.K Verma, **Some functorial properties of Schatten classes**. Adv. Oper. Theory 5, 1406–1413 (2020).

## Conferences and Invited Talks

- Talk at "Seminar in algebra and functional analysis (SAFA)" at Faculty of Mathematics and Physics, University of Ljubljana, Slovenia. Talk title: Kaplanski Density property in locally  $C^*$ -algebras and a Sherman-Takeda type theorem.
- Contributory talk at SWOT-2025, University of Agriculture, Krakow (Poland). 21-24 July, 2025.
- IWOTA-2025, University of Twente, Enschede (Netherlands) 14-18 July, 2025.
- Contributory talk- International workshop on Operator theory and its Applications (IWOTA-2024)- University of Kent, Canterbury (U.K) (12-16 August, 2024).
- National conference on Operator theory and function spaces- Shiv Nadar Institute of Eminence (Attended 27-29 March, 2024).
- Indian Women in Mathematics conference- IISER Bhopal. (Attended 13 July-15 July, 2023)
- Invited as a short-term visiting scholar at department of mathematics IIT-Kanpur. (21 Nov-05 Dec)
- International conference on recent trends in mathematics, Hansraj college . Presented a paper. (22-24 Dec 2021, Online)
- Conference on algebra and analysis, Ambedkar University. Presented a paper. (23, April 2021, Online).
- Advanced instructional school in operator theory, IIT-Kanpur . (12 dec-28 dec, 2019)
- National workshop in functional analysis and topology, LNMIIT Jaipur. (March 2018)
- Annual foundation school-III, Kerala school of mathematics, Kozhikode.(July 2018)
- Annual foundation school-I, IIT-delhi. (December 2017)
- Summer research program, IISER-Mohali. Worked under guidance of Prof. I.B.S Passi and learned tropical algebras. (May 2013)

## Teaching

2024-2025       Instructor/Lecturer at MITS- Gwalior for B.Tech course

- Research Methodology (PhD Coursework)
- M3: Engineering Mathematics-3 (B.Tech semester-IV)
- Linear Algebra (B.Tech Semester I)
- M2: Engineering Mathematics-2 (B.Tech semester-III)

2023-2024       Teaching Assistant for BS courses at IISER-Bhopal.

- MTH 101: Linear Algebra (Summer)
- MTH 201: Probability and Statistics (Winter)

2019-2020       Teaching Assistant for M.Sc courses at Jawaharlal Nehru University.

- Complex Analysis (Summer)
- Functional analysis (Winter)

## **Teaching (continued)**

2018-2019      ■ Teaching Assistant for BTech courses at Jawaharlal Nehru University, New Delhi.

- Engineering Mathematics- 1 (Summer)
- Engineering Mathematics- 2 (Winter)

## **Skills**

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| Languages | ■ Strong reading, writing and speaking competencies for English and Hindi.   |
| Coding    | ■ Matlab, L <sup>A</sup> T <sub>E</sub> X.   |
| Misc.     | ■ Academic research, teaching, training, consultation, L <sup>A</sup> T <sub>E</sub> X typesetting and publishing. |

## **Miscellaneous Experience**

### **Awards and Achievements**

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| 2024 | ■ <b>SERB International Travel Support</b> , granted by Science and engineerign research board (Govt. of India) for presenting paper in IWOTA-2024, University of Kent, Cantebrury (U.K) |
| 2017 | ■ <b>CSIR-JRF</b> , Fellowship granted by CSIR for pursuing PhD in Mathematics.  |

### **Certification**

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| 2016 | ■ <b>CSIR-NET for lecturership in Mathematical Sciences</b> . Awarded by Council for Scientific and Industrial research (Government of India). |
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