BIODATA

Name	: Akhilesh Prasad
Designation	: Professor (HAG)
Correspondence Address	: Department of Mathematics & Computing, Indian Institute of Technology (ISM), Dhanbad – 826004
Contact Number	: +91-326-2235666 (Office)
E-mail	: apr_bhu@yahoo.com; aprasad@iitism.ac.in
Educational Qualifications	: First Division throughout (High School to M.Sc.)
Ph.D.	: Awarded in 2002, Department of Mathematics, Banaras Hindu University, Varanasi
Supervisor	: Prof. R. S. Pathak
Ph.D. Thesis Title	: Pseudo-Differential Operators on Gevrey Spaces
Specialization	: Functional Analysis
Research Interests	: Distribution Theory, Pseudo-Differential Operators, Wavelets
WOS Research ID	: FSD-9096-2022
Scopus ID	: 7401882139
Google Scholar	: 0SlD50EAAAAJ
ORCID ID	: 0000-0003-4715-5774

Academic Positions:

7. Professor (HAG), Department of Mathematics & Computing, IIT (ISM)-Dhanbad continuously since July 01, 2026.
6. Professor, Department of Mathematics & Computing, IIT (ISM)-Dhanbad continuously since June 06, 2019 to June 30, 2026. (Department of Mathematics & Computing was formerly known as Department of Applied Mathematics)
5. Associate Professor, Department of Applied Mathematics, IIT (ISM)-Dhanbad since September 07, 2010 to June 05, 2019. (IIT (ISM)-Dhanbad was formerly known as Indian School of Mines, Dhanbad / ISM, Dhanbad)
4. Assistant Professor, Department of Applied Mathematics, ISM-Dhanbad since September 07, 2007 to September 06, 2010.
3. Post-Doctoral Fellow/ Principal Investigator under DST SERC FAST TRACK Proposal for Young Scientists Scheme at Department of Mathematics, Banaras Hindu University, Varanasi since December 2004 to September 06, 2007.
2. Lecturer, Department of Mathematics, Jagatpur P.G College Varanasi, affiliated to V.B.S. Purwanchal University, Jaunpur since August 2003 to November 2004.
1. Research Scholar, Department of Mathematics, BHU-Varanasi since January 1998 to February 2002.

Sponsored Projects (Running /Handled):

S. N.	Name of the agency	Title of Project	Started	Completed	Total Cost (Rs)	PI/Co-PI
10.	DRDO: Project No.2225 (S/SE Panel)	Robust signal reconstruction and prediction in aeronautical system using derivative sampling expansions	January 13, 2026	January 12, 2029 (On-going)	44,98,110/-	Co-PI (PI: Prof. A. A. Selvan)
9.	SERB: Project No.: MTR/2021/000193	Linear Canonical Transform and associated Wavelets and Wavelet Transform	February 23, 2022	February 22, 2025	6,60,000/-	PI
8.	NBHM (DAE): Project No.: 020011/7/2021 NBHM(R.P)/ R&D II/8164	The μth order Mehler-Fock transform and some allied operators on function spaces	April 01, 2021	March 31, 2024	16,49,533/-	PI
7.	DST:SERB File No.: EMR/ 2016/005141/MS	The Kontorovich-Lebedev Transform and related Integral Operators on Function and Distribution Spaces	March 16, 2018	March 15, 2021	15,79,094/-	PI
6.	DST: Project No. INT/RU/RSF/P-01 (**Indo-Russian** S&T Project)	Classical operators on Sobolev and Banach function spaces and Quasi- conformal analysis	October 05, 2016	October 04, 2019	41,51,400/-	Co-PI (PI: Prof. P. Jain, SAU New Delhi)
5.	CSIR: Project No.: 25(240)/15/ EMR-II	A Pair of Fractional Powers of Bessel Wavelet Transform and Pseudo-Differential Operators	October 01, 2015	September 30, 2018	17,17,800/-	PI
4.	NBHM (DAE): Project No.: 2/48 (14)/2011/ R&D -II/3501	Pseudo-Differential Operators and Wavelet Transform Involving Fractional Fourier Transform on Function and Distribution Spaces	April 01, 2012	March 31, 2015	10,07,500/-	PI
3.	UGC: Project No.: 34-145/2008(SR)	Pseudo-differential operators associated with Bessel Operator on Gevrey Spaces	February 01, 2009	January 31, 2012	6,02,345/-	PI
2.	IIT (ISM) Project No.: MRP(AM)/ Acad/05/2008	A pseudo-differential operator involving Hankel transform on Gevrey Spaces	August 01, 2008	July 31, 2010	1,00,000/-	PI
1.	DST: Project No.: SR/FTP/ MS-07/2003	Pseudo-differential operators and the Hankel transform on Gevrey Spaces	December 01, 2004	September 06, 2007	9,25,000/-	PI

Ph. D Guided/Supervising:

⋆ **Guided**: Twenty

S.N.	Regn. No.	Name	Topic	Year	Present Position
20.	PhD/M-30199/ 2018 (VBU Hazaribag)	Chandra Roy (Guide: Prof. G. K. Jha, Co-guide: Prof. A. Prasad)	Study of Quadratic-Phase Hankel Transformations and Some Associated Operators	2025	Project Fellow, CIMFR Dhanbad
19.	19DR01791	R. K. Verma	Characterization of Dunkl transform and development of its associated operators	2024	Assistant Professor. Siksha 'O' Anusandhan University, Bhubaneswar
18.	18DR0011	Ajay K. Gupt	Investigations and theoretical developments on the Lebedev-Skalskaya transforms	2024	Assistant Professor, Galgotias University Greater Noida
17.	17DR000567	Amit Kumar (External Guide: Prof. Pankaj Jain) (SAU New Delhi)	Recent advances in linear canonical transform and allied operators	2022	Assistant Professor, Lloyd Business School, Noida
16.	17DR000573	Manab Kundu	Linear canonical transform and its generalization in quaternion settings	2022	Assistant Professor, SRM University, Amaravati
15.	17DR000464	J. S. Maan	A comprehensive analysis of certain operators related to the index Whittaker transform	2022	Assistant Professor, NIT Hamirpur
14.	2016DR000120	Sandeep. K. Verma	Characterization of zero-order Mehler-Fock transform and its allied operators	2021	Assistant Professor, SRM University, Amaravati
13.	2015DR1000	Pratap B. Sharma	A progress on quadratic-phase Fourier transform and related operators	2021	Assistant Professor, NIT, Andhra Pradesh
12.	2015DR0114	Zamir A. Ansari	Study of certain integral operators in the framework of linear canonical transform domain	2020	Assistant Professor, IIIT Sonepat
11.	2015DR0314	Tanuj Kumar	An investigation and development of a pair of linear canonical Hankel transforms and some allied integral operators	2019	Assistant Professor, UPES, Dehradun
10.	2014DR0165	Upain K. Mandal	Study of Kontorovich-Lebedev transforms and related operators	2018	Assistant Professor, Nalanda College, Patliputra University Patna
9.	2014DR0010	Puneet K. Maurya	An investigation and development of Hankel-type integral transformations and associated operators	2017	Lecturer, DIET, Azamgarh (UP Govt.)
8.	2013DR0184	Kanailal Mahato	Study of certain pseudo-differential operators and wavelet transforms associated with fractional Hankel transforms	2017	Assistant Professor, BHU, Varanasi
6.	2012DR0171	Manoj K. Singh	A study of pseudo-differential operator involving Fourier-Jacobi transform and Sobolev type spaces	2016	Assistant Professor, St. Xavier College, Ranchi University
6.	2012DR0181	Praveen Kumar	Investigation in the theory of fractional wavelet transform and pseudo-differential operator	2016	Sri Sathya Sai Institute of Higher Learning, AP

5.	2012DR0170	Sumant Kumar	Pseudo-differential operators involving Hankel-Clifford transformations and wavelet transformation	2015	Assistant Professor, Gossner College, Ranchi University
4.	2012DR1008	Vanita Jain (External Guide: Prof. P. K. Jain) (Delhi University)	Certain classes of analytic functions in the unit disk having negative coefficients	2014	Associate Professor, Maharaja Agrasen College, Delhi University
3.	2010DR0001	Vishal K. Singh	Pseudo-differential operators on some function and distribution spaces	2013	School Teacher, Azamgarh (UP Govt.)
2.	2009DR0021	Ashutosh Mahato	The fractional wavelet transforms on some function spaces	2013	Assistant Professor, J. J. College, VBU Hazaribag
1.	2008DR0040	Manish Kumar	A study of certain pseudo-differential operators on function and distribution spaces	2012	Professor, BITS Plani, Hyderabad Campus

⋆ **Supervising**:

S.N.	Regn. No.	Name	Topic
5.	25DP0066	Debabrata Biswal	...
4.	24DR0250	Chayan Bhattacharjee	...
3.	23DR0282	Pratiksha Moond	Characterization of Hankel-Stockwell transform and comprehensive analysis of associated operators
2.	23DR0129	Raj Kumar	Multiresolution Analysis and wavelet transforms in the frame work of Linear Canonical Transform
1.	22DR0230	Sudhanshu Ranjan	The μ^{th} order Mehlar-Fock transform and some allied operators

M. Phil Supervised (Guided /Enrolled):

⋆ **Guided**: Five

S.N.	Regn. No.	Name	Topic	Year	Present Position
5.	2014MP0016	Chandra Roy	The wavelet transformation involving first fractional Hankel transformation	2015	Project Fellow CIMFR Dhanbad
4.	2013MP0042	D. Biswal	Hankel-Clifford transformation and pseudo-differential operator	2014	Assistant Professor, KKS Womens College, Balasore
3.	2012MP0028	Kanailal Mahato	A study on pseudo-differential operators	2013	Assistant Professor, BHU, Varanasi

2.	2011MP0004	Santanu Manna	A study of fractional Fourier transform and continuous wavelet transform	2012	Associate Professor, IIT Indore
1.	2010MP0007	B. S. Kumbhakar	An introduction to fractional Fourier transform	2011	Associate Professor, NIT Meghalaya

M.Tech/ M. Sc. (Project/Dissertations) Guided/Enrolled:

* Five Years Integrated M. Tech / M. Sc. (M&C):
  (a) Guided: Seventeen
  (a) Enrolled: Two
* Two Years M. Sc (M&C):
  (a) Guided: Twenty seven
  (b) Enrolled: Two

Editorship:

1. Asian-European Journal of Mathematics (World Scientific Publishing)

Online Courses Designed/Offered (MOOC/NPTEL/SWAYAM etc.):

1. Functional Analysis and its Applications

Patent Filed / Published / Granted:

1. **Title:** Lightweight Quantum Image Encryption using a Novel Chaotic Feistel Network; Application Number 202531065005, Date of filing: 08.07.2025 and Publication Date: 25.07.2025
   Inventor(s): Dr. Akhilesh Prasad, Mr. Pranav P Jagathpathy, Mr. Anany Pravin, Dr. Manish Kumar

Membership of Professional Societies:

11. Fellow-Institute of Mathematics and its Applications (FIMA)
10. Member, National Academy of Sciences, India (MNASc.)
9. Life Membership of International Society for Analysis, Its Applications and Computations (ISAAC)
8. Annual Membership of American Mathematical Society.
7. Life Membership of the Indian Science Congress Association.
6. Life membership of Indian Mathematical Society.
5. Life Membership of Ramanujan Mathematical Society.
4. Life membership of Calcutta Mathematical Society
3. Life membership of Mathematical Society, Banaras Hindu University, Varanasi.
2. Life membership of Academy of Progress of Mathematics, Banaras Hindu University, Varanasi.
1. Life membership of Society of Applied Mathematics, Indian School of Mines, Dhanbad.

Reviewer of Some Reputed Journals:

37. Applicable Analysis (Taylor & Francis)
36. Applied Mathematics (Scientific Research)
35. Applied Mathematics and Computation (Elsevier)
34. Analysis Mathematica (Springer)
33. Asian-European Journal of Mathematics (World Scientific)
32. Banach Journal of Mathematical Analysis (Springer-Birkhauser)
31. Bulletin of the London Mathematical Society
30. Complex Analysis and Operator Theory (Springer-Birkhauser)
29. Complex Variables and Elliptic Equations (Taylor & Francis)
28. Filomat
27. Fixed Point Theory and Applications (Springer)
26. International Journal of Wavelets, Multiresolution and Information Processing (World Scientific)
25. Integral Transforms and Special Functions (Taylor & Francis)
24. Journal of Analysis (Springer)
23. Journal of the Franklin Institute (Elsevier)
22. Journal of Function Spaces (Hindawi)
21. Journal of Indian Mathematical Society
20. Journal of Inequalities and Applications (Springer)
19. Journal of Mathematical Analysis and Applications (Elsevier)
18. Journal of Mathematics (Hindawi)
17. Journal of Pseudo-Differential Operators and Applications (Springer-Birkhauser)
16. Mathematical Methods in the Applied Sciences (Wiley)
15. Mathematical Reviews (American Mathematical Society)
14. National Academy Science Letters (Springer)
13. Proceedings of the National Academy of Sciences, India Section A: Physical Sciences (Springer)
12. Pure and Applied Mathematics Quarterly (International Press)
11. Ramanujan Journal (Springer)
10. Results in Mathematics (Springer-Birkhauser)
9. Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas (Springer)
8. Rocky Mountain Journal of Mathematics (Cornell University)
7. Science China Mathematics (Springer)
6. Transactions on Signal Processing (IEEE)
5. Zentralbatt Maths (European Mathematical Society)
4. Applied Mathematics Letter (Elsevier)
3. Boletim da Sociedade Paranaense de Matemátic
2. Investigations of Mathematical Sciences
1. Thai Journal of Mathematics

Number of Courses / Practical's Designed:

2. Wavelets: Theory and Applications (Course Code: NMCD539)
1. Distribution Theory and its Applications (Course Code: NMCD536)

Travel Grants for International Conference/Collaboration work:

11. Invited to discuss scientific research and explore future collaborations by Prof. L. P. Castro, Department of Mathematics, University of Aveiro, **Portugal** [**University of Aveiro, Portugal**] **(2026)**.
10. International Society for Analysis, its Applications and Computation (ISAAC 2023) University of Sao Paulo, Campus Ribeirao Preto, **Brazil**. [**SERB: MATRICS Project**] **(2023)**.
9. International conference on Subdivision; Geometric and Algebraic Methods; Isogeometric Analysis and Refinability, (SMART 2022), University of Bologna, Italy at Rimini, **Italy**. [**IIT (ISM) PDA**] **(2022)**.
8. Collaboration work at Steklov Mathematical Institute / People Friendship University, Moscow, **Russia** under Indo-Russian project under grant no. INT/RU/ RSF/P-01 [**DST Indo-Russian Project**] **(2018)**
7. International conference "Strobl18" Harmonic Analysis and Applications, Strobl, **Austria**. [**IIT (ISM) PDA**] **(2018)**
6. 7th Conference on Function Spaces at Southern Illinois University, Edwardsville, **USA**. [**ISM PDA + Host Institute**] **(2014)**.
5. International Conference on Applied & Computational Mathematics at Ankara, **Turkey**. [**CSIR + ISM PDA**] **(2012)**.
4. International Conference on Applied Mathematics & Approximation Theory at Ankara, **Turkey**. [**ISM PDA**] **(2012)**.
3. International Congress of Mathematician (ICM-2010) at Hyderabad - [**NBHM / ICM**] **(2010)**.
2. International Conference on Approximation Theory and Signal Analysis at Lindau, **Germany**. [**ISM PDA**] **(2009)**.
1. International Conference at Halmholtz Zenturm Munchen, **Germany**. [**DST + Host Institute**] **(2007)**.

Training Programme/Workshop/Conferences/Lectures/other academic meets Organized:

8. Organized a Malaviya Mission Teacher Training Programme on "Wavelet Analysis and Applications" during November 10-15, 2025 as a Coordinator. [**Financial Support: UGC**]. Total cost Rs. 6, 30, 300/-
7. Organized a "National Conference on Mathematical Analysis and Applications", during September 04-06, 2025 as a convener. Total cost Rs. 14, 77, 500/- [**Financial Support: SERB + NBHM**].
6. Organized a "National Conference on Harmonic Analysis and Applications", during December 02-04, 2022 as a convener. Total cost Rs. 6, 06, 000/- [**Financial Support: SERB + IIT (ISM)**].
5. Organized a Short Term Advanced Training Programme on "Integral Transformations, Distributions, Wavelet Analysis and Applications" (Phase-II), during October 08-12, 2018 as a coordinator. Total cost Rs. 2, 13, 924/- [**Self Finance**].

4. Organized a Short Term Training Programme on "Non-linear Analysis and Optimization", during December 01-05, 2017 as a co-coordinator. Total cost Rs. 1, 67, 115/- [**Self Finance**].
3. Organized a Short Term Training Programme on "Nonlinear Analysis and its Application to Optimization Techniques", during August 18 - 22, 2017 as a co-coordinator. Total cost Rs. 3, 63, 500/- [**Financial Support: SERB + NBHM**].
2. Organized a Short Term Advanced Training Programme on "Integral Transformations, Distributions and Wavelet Analysis", during December 14-18, 2015 as a coordinator. Total cost Rs. 6, 27, 250/- [**Financial Support: NBHM + SERB + INSA**].
1. A talk of Prof. (Retd.) P. K. Jain (F.N.A.Sc), University of Delhi on topic "Schauder Decompositions and Frames in Banach Spaces" was organised on February 9, 2012 at 3:30 PM in the Management Study Hall.

Other Information (Organizational/Committee/ Administrative Work):

I- Internal IIT (ISM):

27. Member of Anti-Ragging Squad/Flying Squad for AY 2025-26
26. Chief Warden Sapphire Hostel during July 01, 2025 to continue.
25. Mentor of some Integrated M.Tech students since September 30, 2024 to continue.
24. Member of special invigilation teams for Semester Examination 2025 - 2026
23. Anti-ragging committee for new entrants since 2022 to continue.
22. Departmental Time-Table in-charge during February 14, 2022 - April 10, 2024.
21. DPGC convener during July 2018 - October 14, 2022. **(Two Terms)**.
20. Chief Warden Diamond Hostel during July 01, 2019 - June 30, 2020.
19. Warden Diamond Hostel during June 01, 2018 - June 30, 2019.
18. Senate Member IIT (ISM) Dhanbad Since June 06, 2019 to continue
17. Member of DFSC (Departmental Faculty Screening Committee) since 2019 to continue.
16. Coordinator of M. Tech (Data Analytics) course continuously from Session 2019-2020.
15. JRF in-charge (Mathematics & Computing / Applied Mathematics) during September 2018- August 2021.
14. Member of central library committee during June 01, 2015 - May 31, 2018.
13. Coordinator of M. Tech (M & C) Integrated course during Session 2011-12 to June 2019.
12. DSC members/Chairman for Ph.D students of several Departments like AGL/AGP/MS/M&C etc since 2019 to continue.

II- External within India:

11. Member of the Doctoral Committee of SRM University, Andhra Pradesh, December 2024 to continue.
10. RRC member of Dr. Vishwanth Karad MIT-World Peace University, Pune, December 2023 to continue.

9. Member of the Doctoral Committee of VIT-University, Andhra Pradesh, December 2020 to continue.
8. Member of Faculty selection Committee, NIT Raipur, 2023
7. Member of Faculty selection Committee, NIT Kurukshetra, 2023
6. Member of the Board of the school of Physical Sciences, Mizoram University, since October 3, 2022 to continue.
5. Member of Faculty selection Committee, Jharkhand Public Service Commission, 2019
4. PhD Thesis Examiner: IIT Delhi, IIT Roorkee, IIT (BHU) Varanasi, IIT Patna, NIT Kurkshetra, NIT Patna, Delhi University, NERIST Itanagar, Institute of Science, BHU Varanasi, Central University Motihari, MS University Vadodara, Lucknow University etc.

III- International:

3. PhD Thesis Examiner: Faculty of sciences Ain Chock, Hassan II University of Casablanca - Morocco, 2025
2. Research project evaluation Committee, National Research, Development and Innovation Office, Hungary, 2024
1. Research project evaluation Committee, National Research, Development and Innovation Office, Hungary, 2023

List of Major Publications:

139. **Akhilesh Prasad** and P. Moond, Stockwell Transform Based on the Quadratic-Phase Hankel Transform, *Integral Transforms and Special Functions,* **DOI:** 10.1080/10652469.2026.2703798. **(Taylor & Francis)/SCIE/Q2**.
138. S. Ranjan, **Akhilesh Prasad** and U. K. Mandal, Sobolev-type spaces related to the μth order Mehler-Fock transform, *Journal of Pseudo-Differential Operators and Applications*, **17** (2), Article number: 31, pp. 1-18, (2026). **(Springer-Birkhauser)/ SCIE/Q1**.
137. R. K. Verma and **Akhilesh Prasad**, The infinite order integro-differential operators associated with Dunkl operator on $\mathbb{R}$, *Complex Analysis and Operator Theory*, **20** (3), Article number: 76, pp. 1-18, (2026). **(Springer-Birkhauser)/ SCIE/Q2**.
136. S. Ranjan, **Akhilesh Prasad** and U. K. Mandal, Wavelet transform via μth order Mehler-Fock transform, *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, DOI: 10.1007/s40010-026-01127-w, (2026). **(Springer)/SCIE/Q3**.
135. **Akhilesh Prasad** and A. Kumar, Weyl transform associated with linear canonical wavelets, *Journal of Analysis*, **34** (4), pp. 2213-2230, (2026). **(Springer) / ESCI/Q1**.
134. J. S. Maan and **Akhilesh Prasad**, The Mehler–Fock–Clifford Transform Framework for Parseval–Goldstein and Abelian Theorems in Weighted Lebesgue Spaces, *Acta Scientiarum Mathematicarum*, **DOI:** 10.1007/s44146-026-00230-z (2026). **(Springer)/ESCI/Q3**.
133. R. K. Verma and **Akhilesh Prasad**, On the Abelian Properties of Dunkl Transforms: A Distributional Approach, *Asian-European Journal of Mathematics*, **19** (10), Article number: 2550157, pp. 1-10, (2026). **(World Scientific)/ESCI/Q3**.

132. **Akhilesh Prasad**, and Raj Kumar, Multiresolution Analysis and Orthonormal Linear Canonical Wavelets in Generalized Sobolev Spaces, *Journal of Pseudo-Differential Operators and Applications*, **16** (4), Article number: 86, (2025), pp. 1-34, (2025). **(Springer-Birkhauser)/ SCIE/Q1**.

131. **Akhilesh Prasad**, S. Ranjan, An operational calculus of μ^{th} order Mehler-Fock transform, *Complex Analysis and Operator Theory*, **19** (2), Article number: 41, pp. 1-33, (2025). **(Springer-Birkhauser)/SCIE/Q2**.

130. R. K. Verma and **Akhilesh Prasad**, Besov-type spaces associated with Dunkl wavelet transform on $\mathbb{R}$, *Mathematical Methods in the Applied Sciences*, **48** (8), pp. 8985-8993, (2025). **(Wiley)/SCIE/Q1**.

129. **Akhilesh Prasad**, U. K. Mandal and Sudhanshu Ranjan, The μ^{th} order Mehler-Fock transform and allied pseudo-differential operator, *Integral Transforms and Special Functions,* **36** (3), pp. 163-175, (2025). **(Taylor & Francis)/SCIE/Q2**.

128. A. K. Gupt and **Akhilesh Prasad**, The heat kernel in the framework of the Lebedev-Skalskaya transform, *Applicable Analysis,* **104** (8), pp. 1597-1609 (2025). **(Taylor & Francis)/SCIE/Q2**

127. C. Roy, T. Kumar, **Akhilesh Prasad**, and G. K. Jha, Pseudo-differential operators associated with a pair of quadratic-phase Hankel transformations, *Journal of Pseudo-Differential Operators and Applications*, **16** (1), Article number: 05, pp. 1-26, (2025). **(Springer-Birkhauser)/ SCIE/Q1**.

126. R. K. Verma and **Akhilesh Prasad**, SG pseudo-differential operators in Dunkl setting, *Georgian Mathematical Journal,* **32** (3), pp. 501-513, (2025). **(De Gruyter)/ SCIE/Q2**.

125. C. Roy, T. Kumar, **Akhilesh Prasad**, and G. K. Jha, The wavelet transformation associated with quadratic-phase Hankel transform, *National Academy Science Letters,* **48** (1), pp. 65-71, (2025). **(Springer)SCIE/Q3**.

124. C. Roy, **Akhilesh Prasad** and G. K. Jha, The wave packet transformation in the framework of quadratic-phase Hankel transformation, *International Journal of Applied and Computational Mathematics,* **11** (1), Article number: 02, pp. 1-12, (2025). **(Springer) / SCOPUS.**

123. K. L. Mahato, S. Arya and **Akhilesh Prasad**, Pseudo-differential operators associated with Gyrator transform, *Hacettepe Journal of Mathematics and Statistics*, **54** (4), 1426-1441, (2025). **(DergiPark)/SCIE/Q2**.

122. S. Varghese, **Akhilesh Prasad** and M. Kundu, Properties and applications of quaternion quadratic phase Fourier transforms, *Journal of Pseudo-Differential Operators and Applications*, **15** (4), Article number: 84, pp. 1-26 (2024). **(Springer-Birkhauser) / SCIE/Q1**.

121. **Akhilesh Prasad** and M. Kundu, Spectrum of quaternion signals associated with quaternion linear canonical transform, *Journal of the Franklin Institute*, **361** (2), pp. 764-775 (2024). **(Elsevier)/SCIE/Q2**.

120. A. K. Gupt, U. K. Mandal and **Akhilesh Prasad**, Lebedeb-Skalskaya transform related continuous wavelet transform, *Results in Mathematics*, **79** (3), Article number: 99, pp. 1-21 (2024). **(Springer-Birkhauser)/SCIE/Q2**.

119. **Akhilesh Prasad**, R. K. Verma and S. K. Verma, Wavelet transform associated with Dunkl transform, *Integral Transforms and Special Functions,* **35** (9), pp. 481-496, (2024). **(Taylor & Francis)/SCIE/Q2**.

118. J. S. Maan and **Akhilesh Prasad**, A pair of pseudo-differential operators involving index Whittaker transform in $L_2^a(\mathbb{R}_+; m_a(x)dx)$, *Acta Mathematica Sinica, English Series*, **40** (6), pp. 1420–1430, (2024). **(Springer)/SCIE/Q2**.

117. J. S. Maan and **Akhilesh Prasad**, Wave packet transform and wavelet convolution product involving index Whittaker transform, *Ramanujan Journal*, **64** (1), pp. 19-36, (2024). **(Springer)/SCIE/Q2**.

116. J. S. Maan and **Akhilesh Prasad**, Index Whittaker transform for Boehmians, *Indian Journal of Pure and Applied Mathematics*, **55** (2), pp. 489-500-315 (2024). **(Springer)/ INSA/SCIE/Q3**.

115. A. K. Gupt, **Akhilesh Prasad** and U. K. Mandal, Wave packet transform in the framework of Lebedev -Skalskaya transforms, *Acta Scientiarum Mathematicarum*, **90** (1-2), pp. 73-89, (2024). **(Springer)/ ESCI/Q3**.

114. A. K. Gupt and **Akhilesh Prasad**, The infinite-order integro-differential operator related to Lebedev-Skalskaya transform, *Journal of Pseudo-Differential Operators and Applications*, **15** (2), Article number: 21, pp. 1-16 (2024). **(Springer-Birkhauser) / SCIE/Q1**.

113. **Akhilesh Prasad** and R. K. Verma, Weyl transforms associated with Dunkl wavelet transform, *Complex Analysis and Operator Theory*, **17** (7), Article number: 110, pp. 1-17, (2023). **(Springer-Birkhauser)/SCIE/Q2**.

112. U. K. Mandal and **Akhilesh Prasad**, The generalized Kontorovich-Lebedev transform and associated operators, *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas,* RACSAM, **117** (3), Article: 126, pp. 1-15, (2023). **(Springer)/SCIE/Q1**.

111. M. Kundu and **Akhilesh Prasad**, Pseudo-differential operator in quaternion space, *Mathematical Methods in the Applied Sciences*, **46** (9), pp. 10749-10766, (2023). **(Wiley)/SCIE/Q1**.

110. **Akhilesh Prasad** and M. Kundu, Uncertainty principles and applications of quaternion windowed linear canonical transform, *Optik*, **272** (1), Article number: 170220 (2023). **(Elsevier)/SCIE/Q2**.

109. **Akhilesh Prasad** and A. Kumar, Canonical potential and L^p-Sobolev space involving linear canonical Fourier transform, *Integral Transforms and Special Functions,* **34** (4), pp. 295-315 (2023). **(Taylor & Francis)/SCIE/Q2**.

108. A. K. Gupt, **Akhilesh Prasad** and U. K. Mandal, The fractional maximal and Riesz potential operators involving the Lebedev-Skalskaya transform, *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, **93** (4), pp. 613-620, (2023). **(Springer) / SCIE/Q3**.

107. A. Kumar, **Akhilesh Prasad** and P. Jain, The Weyl correspondence in the linear canonical transform domain, *Filomat,*, **37** (22), pp. 7431-7444, (2023). **(SCIE)/Q2**

106. P. B. Sharma and **Akhilesh Prasad**, Abelian theorems for quadratic-phase Fourier wavelet transform, *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, **93** (1), pp. 75-83, (2023). **(Springer)/Q3**.

105. U. K. Mandal and **Akhilesh Prasad,** A pair of Barut-Girardello type transforms and allied pseudo-differential operators, *Rendiconti del Circolo Matematico di Palermo*, **72** (1), (2023). **(Springer) / ESCI/Q2**.

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Invited Talk:

17. Short Term/Faculty Development Programme on Exploring Wavelets: From Teaching Foundations to Research Innovations under Malviya Mission Teacher Training Programme during May 11 - 16, 2026 organized by IIT Patna. (**Delivered two talks** entitled "From Fourier Analysis to Wavelet Theory: Foundations, Applications, and Research Directions")

16. National e-Workshop on Mathematical Techniques and Research Innovation in Interdisciplinary Applications (e-MATRICA-2025) during May 19–23, 2025 organized by NIT Hamirpur, (**Delivered a talk** entitled "A study on the μ^{th} order Mehler-Fock transform")
15. 90th Annual Conference of the Indian Mathematcal Society during December 23-26, 2024 organized by Dr. Vishwanath Karad MIT World Peace University, Pune. (**Delivered a talk** entitled "An operational calculus of μ^{th} order Mehler-Fock transform")
14. 8th Refresher Course in Mathematics for teachers of University and Colleges (RCM 2023) during December 08-21, 2023 organized by Malviya Mission Teacher Training Centre, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur. (**Delivered a talk** entitled "Linear canonical transform and allied wavelet transform")
13. Instructional School for Mathematical Foundation (ISMF 2022) during October 08-23, 2022 organized by Indian Institute of Technology, Patna.
12. National conference of Academy for progress of Mathematics on Recent Advances in Mathematical Analysis and Applications(NCAPM-RAMAA-2022) during May 07 - 08, 2022 organized via hybrid mode by DST-Centre for Interdisciplinary Mathematical Sciences, Institute of Science, BHU-Varanasi (**Delivered a talk** entitled" The quadratic-phase Fourier transform").
11. 37th Annual conference of the Mathematical Society, BHU-Varanasi on Modern Mathematics and its Applications (NCMMA-2022) during January 29 - 30, 2022 organized via virtual mode by Department of Mathematics, Institute of Science, BHU-Varanasi (**Delivered a talk** entitled" Wavelet transforms associated with linear canonical transform"). I was **chief guest** in the valedictory function of this conference.
10. International Conference on Recent Advances in Mathematics and Computational Engineering (ICRAMCE-2022) during January 06 - 07, 2022 organized via virtual mode by SSN College of Engineering, Tamil Nadu(**Delivered a talk as keynote speaker on paper** entitled" Continuous wavelet transform associated with linear canonical transform"). I was **chief guest** in the inaugural function of this conference.
9. International conference on Analysis and its Applications-2020 (ICAA _ 2020 _ Nepal), during April 9-11, 2021 organized via virtual mode jointly by Nepal Mathematical Society, Tribhuvan University, Khamandu University, South Asian University, New Delhi, (**Delivered a talk on paper** entitled" The convolution and pseudo-differential operator associated with zero-order Mehler-Fock transform").,
8. Short Term Training Programme on Nonlinear Analysis and its Application to Optimization Techniques during August 18 - 22, 2017 at Department of Applied Mathematics, Indian Institute of Technology (ISM), Dhanbad.
7. QIP Short term course on Algebra, Analysis and Applications during July 03-09, 2017 at Department of Mathematical Sciences, Indian Institute of Technology (BHU), Varanasi.
6. National Conference on Applications of Mathematics during February 25-26, 2016 at Department of Mathematics and Computer Science, Mizoram University, Aizwal. (**Delivered a talk on paper** entitled "Differential Operator Associated with fractional Fourier transform").
5. Conference on Analysis and Applications during December 09-11, 2017 at Department of Mathematics,South Asian University, New Delhi. (**Delivered a talk on paper** entitled "A pair of linear canonical transformations and associated pseudo-differential operators").

4. International Conference on Applied & Computational Mathematics during October 03-06, 2012 at Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey. (**Delivered a talk on paper** entitled "The fractional Fourier transform and its Applications").
3. Advanced Training Programme on Integral Transforms, Wavelets, Distribution Theory and Applications during July 12-21, 2012 at DST- Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi, **Delivered a talk on paper** entitled "The Generalized Wavelet Transform associated with Fractional Fourier Transform").
2. Under Graduate Training Programme in Linear Algebra and Analysis during May 28- June 06, 2012 at Department of Applied Mathematics, Indian School of Mines, Dhanbad (**Delivered some lectures on Wavelets**).
1. Workshop on Approximation Theory and Signal Analysis during March 21-24, 2009 at Institute of Biomathematics and Biometry at the Helmholtz centre Munich, Lindau (Lake Constance), Germany. (**Delivered a talk on paper** entitled "A generalized Pseudo-differential Operator on Gel'fand-Shilov Space and Sobolev Space").

Conference / Symposium /Workshop Attended / Presented papers:

International:

12. 14^{th} International Society for Analysis, its applications and Computation (ISAAC 2023) Congress, July 17-21, 2023, organized by University of São Paulo, Campus Ribeirão Preto, Brazil. (**Delivered a talk on paper** entitled "Pseudo-differential operator associated with index Whittaker transform").
11. 3^{rd} International Conference on Subdivision; Geometric and Algebraic Methods; Isogeometric Analysis and Refinability, (SMART 2022) September 20-24, 2022, organized by University of Bologna, Italy at Rimini, Italy. (**Delivered a talk on paper** entitled "Weyl transform associated with linear canonical wavelets").
10. International Conference on Analysis and its Applications- 2021, April 08-11, 2021, organized by Nepal Mathematical Society, Kathmandu. (**Delivered a talk on paper** entitled "The convolution and pseudo-differential operator associated with zero-order Mehler–Fock transform").
9. International Conference "Strobel18" Harmonic Analysis and Applications, June 04-08, 2018, Strobl, Austria. (**Delivered a Scientific talk on paper** entitled "Pseudo-differential operators involving Kontorovich-Lebedev Transform").
8. 7th Conference on Function Spaces, May 20-24, 2014, at Southern Illinois University, Edwardsville, USA. (**Delivered a talk on paper** entitled "Pseudo-differential operators involving Hankel-Clifford Transformation").
7. International Conference on Applied & Computational Mathematics, October 03-06, 2012 at Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey. (**Delivered a talk on paper** entitled "The fractional Fourier transform and its Applications").
6. International Conference on Applied Mathematics & Approximation Theory, May 17-20, 2012 at TOBB University of Economics, Ankara, Turkey. (**Delivered a talk on paper** entitled "Boundedness of pseudo-differential operator associated with fractional Fourier transform").
5. International Congress of Mathematicians (ICM-2010), September 19-27, 2010, at Hyderbad Convention Centre (HICC), Organized by Univresity of Hyderabad. (**Presented a Paper** entitled "Continuity of Pseudo–Differential Operator Involving Hankel Translation and Hankel Convolution on some Gevrey Spaces").

4. Workshop on Approximation Theory and Signal Analysis (March 21-24, 2009), Institute of Biomathematics and Biometry at the Helmholtz centre Munich, Lindau (Lake Constance), Germany. (**Delivered a talk on paper** entitled "A generalized Pseudo-differential Operator on Gel'fand-Shilov Space and Sobolev Space").
3. Ninth conference of the International academy of Physical Sciences (CONIAPS IX, 2007) February 3-5, 2007), Department of Mathematics, Dr. B. R. Ambedkar (Agra) University, Agra.
2. International Conference on Analysis and Application (December; 22-25, 2003), Department of Mathematics, B.H.U. Varanasi.
1. International Conference on Geometry, Analysis and Applications (August; 21-24, 2000), Department of Mathematics, B.H.U. Varanasi.

National:

17. 80th Annual conference of the Indian Mathematical Society (December 27-30, 2014) at Department of Applied Mathematics, Indian School of Mines, Dhanbad (Participated)
16. Advanced Training Programme on Integral Transforms, Wavelets, Distribution Theory and Applications (July 12-21, 2012), DST- Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi, **Delivered a talk on paper** entitled "The Generalized Wavelet Transform associated with Fractional Fourier Transform"
15. Under Graduate Training Programme in Linear Algebra and Analysis May 28-June 06, 2012), Department of Applied Mathematics, Indian School of Mines, Dhanbad (**Delivered some lectures on Wavelets**).
14. 25th Annual Conference of the Mathematical Society (December; 22-24, 2009) at Department of Mathematics B.H.U. Varanasi-5. (**Presented a paper** entitled "Continuity of Hankel Potential Involving Hankel Translation and Hankel Convolution on some Gevrey Spaces").
13. National seminar on Recent Advances in Theoretical and Applied Seismology (March 27-28, 2009), Department of Applied Mathematics , Indian School of Mines University, Dhanbad-826004. (**Presented a paper** entitled "A generalized Pseudo-differential operator on Gel'fand-Shilov Space")
12. 24th Annual Conference of the Mathematical Society (December; 30-31, 2008) at Department of Mathematics B.H.U. Varanasi-5. (**Presented a paper** entitled "Hankel Transformation on a Gevrey Space").
11. 4th Group monitoring workshop cum 7th meeting of the expert panel on Fast Track Proposals for Young Scientist in Physical and Mathematical Sciences held on April 19-20, 2007 at Sikkim Manipal Institute of Technology, Sikkim.
10. National conference on Modern Analysis and Allied Areas (February 23-24, 2007) at Department of Mathematics, B.H.U.Varanasi-5. (**Presented a paper** entitled "The Sobolev Type Spaces").
9. XXII Annual Conference of The Mathematical Society (December; 15-16, 2006) at Department of Mathematics B.H.U. Varanasi-5.
8. The conference on Mathematics of Bharata Ganita Parisad (November;18-19, 2006)at the Department of Mathematics & Astronomy, Lucknow University Lucknow. (**Presented a paper** entitled "The Closable; Maximal and Minimal Pseudo-differential operator").
7. The XVI Annual Conference of the Jammu Mathematical Society (March; 01-03, 2006) at Department of Mathematics, University of Jammu.

6. XXI Annual Conference of The Mathematical Society (January; 23-24, 2006) at Department of Mathematics B.H.U Varanasi-5, (**Presented a paper** entitled "An Introduction to Pseudo- Differential Operators").
5. National Conference on Analysis and its Application (January; 20-22, 2006) at Department of Mathematics, B.H.U.Varanasi-5. (**Presented a paper** entitled "Pseudo-Differential Operator Involving Hankel Translation and Hankel Convolution on some Gevrey Spaces").
4. National Symposium on Scientific Computing with Application to Partial Differential Equations (Nov; 19-21, 2005), at Department of Mathematics, Indian Institute of Technology, Kanpur.
3. National Conference on Emerging Areas in Mathematical Sciences in first Quarter of the Century (February; 11-13, 2005), Indian Society of Mathematics and Mathematical Sciences at D.D.U University Gorakhpur. (**Presented a paper** entitled "The Generalized Pseudo-Differential Operator on some Gevrey Spaces").
2. National Board of Higher Mathematics, Olympiad Problem Solving Camp. (November; 25-28, 2002), Department of Mathematics, B.H.U Varanasi.
1. Third Annual Conference of the Society for the Special Functions and their Applications (March; 4-6, 2002), Department of Mathematics, B.H.U Varanasi, (**Presented a paper** entitled "Continuity of Pseudo-Differential Operators Associated with the Bessel Operator in some Gevrey Spaces").

Akhilesh Prasad