RESUME

Name	: Akhilesh Prasad
Designation	: Professor
Correspondence Address	: Department of Mathematics & Computing, Indian Institute of Technology (ISM) Dhanbad Pin-826004
Contact Numbers	: +91-326-2235666(Office),
E-mail	: apr_bhu@yahoo.com; aprasad@iitism.ac.in
Educational Qualifications	: Uniform Academic Records with First Division from High School to M.Sc.
Ph.D	: Awarded in 2002 from Department of Mathematics, Banaras Hindu University, Varanasi-221005
Title of Ph.D Thesis	: Pseudo-Differential Operators on Gevrey Spaces
Specialization	: Functional Analysis
Research Interests	: Distribution Theory, Pseudo-Differential Operators, Wavelets.

Academic Positions:

1. Professor, Department of Mathematics & Computing, IIT (ISM)-Dhanbad continuously since June 06, 2019. (Department of Mathematics & Computing was formerly known as Department of Applied Mathematics)
2. 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)
3. Assistant Professor, Department of Applied Mathematics, ISM-Dhanbad since September 07, 2007 to September 06, 2010.
4. 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.
5. Lecturer, Department of Mathematics, Jagatpur P.G College Varanasi, affiliated to V.B.S. Purwanchal University, Jaunpur since August 2003 to November 2004.
6. Research Scholar, Department of Mathematics, BHU-Varanasi since January 1998 to February 2002.

Sponsored Projects as PI (Running /Handled):

S. N.	Name of the agency	Title of Project	Started	Completed	Total Cost (Rs)	Institution
1.	SERB: Project No.: MTR/2021/000193	Linear Canonical Transform and associated Wavelets and Wavelet Transform	February 23, 2022	(Ongoing) It will be completed: February 22, 2025	6,60,000/-	Department of Mathematics & Computing, IIT (ISM), Dhanbad-826004
2.	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/-	Department of Mathematics & Computing, IIT (ISM), Dhanbad-826004

3.	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/-	Department of Mathematics & Computing, IIT (ISM), Dhanbad-826004
4.	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/-	Department of Applied Mathematics, IIT (ISM), Dhanbad-826004
5.	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/-	Department of Applied Mathematics, ISM, Dhanbad-826004
6.	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/-	Department of Applied Mathematics, ISM, Dhanbad-826004
7.	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/-	Department of Applied Mathematics, ISM, Dhanbad-826004
8.	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/-	Department of Mathematics, BHU, Varanasi-221005

Sponsored International Project as Co-PI (Running /Handled):

S. N.	Name of the agency	Title of Project	Started	Completed	Total Cost (Rs)	Institution
1.	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/-	Department of Mathematics, South Asian University, New Delhi-110021

Ph. D Guided/Supervising:

⋆ **Guided (Sole)**: Nineteen

S.N.	Regn. No.	Name	Topic	Year
1.	19DR01791	R. K. Verma	Characterization of Dunkl transform and development of its associated operators	2024

2.	18DR0011	Ajay K. Gupt	Investigations and theoretical developments on the Lebedev-Skalskaya transforms	2024
3.	17DR000567	Amit Kumar (External Guide: Prof. Pankaj Jain)	Recent advances in linear canonical transform and allied operators	2022
4.	17DR000573	Manab Kundu	Linear canonical transform and its generalization in quaternion settings	2022
5.	17DR000464	J. S. Maan	A comprehensive analysis of certain operators related to the index Whittaker transform	2022
6.	2016DR000120	Sandeep. K. Verma	Characterization of zero-order Mehler-Fock transform and its allied operators	2021
7.	2015DR1000	Pratap B. Sharma	A progress on quadratic-phase Fourier transform and related operators	2021
8.	2015DR0114	Zamir A. Ansari	Study of certain integral operators in the framework of linear canonical transform domain	2020
9.	2015DR0314	Tanuj Kumar	An investigation and development of a pair of linear canonical Hankel transforms and some allied integral operators	2019
10.	2014DR0165	Upain K. Mandal	Study of Kontorovich-Lebedev transforms and related operators	2018
11.	2014DR0010	Puneet K. Maurya	An investigation and development of Hankel-type integral transformations and associated operators	2017
12.	2013DR0184	Kanailal Mahato	Study of certain pseudo-differential operators and wavelet transforms associated with fractional Hankel transforms	2017
13.	2012DR0171	Manoj K. Singh	A study of pseudo-differential operator involving Fourier-Jacobi transform and Sobolev type spaces	2016
14.	2012DR0181	Praveen Kumar	Investigation in the theory of fractional wavelet transform and pseudo-differential operator	2016
15.	2012DR0170	Sumant Kumar	Pseudo-differential operators involving Hankel-Clifford transformations and wavelet transformation	2015
16.	2012DR1008	Vanita Jain (External Guide: Prof. P. K. Jain)	Certain classes of analytic functions in the unit disk having negative coefficients	2014
17.	2010DR0001	Vishal K. Singh	Pseudo-differential operators on some function and distribution spaces	2013
18.	2009DR0021	Ashutosh Mahato	The fractional wavelet transforms on some function spaces	2013
19.	2008DR0040	Manish Kumar	A study of certain pseudo-differential operators on function and distribution spaces	2012

⋆ **Supervising**: Three

S.N.	Regn. No.	Name	Topic
1.	23DR0282	Pratiksha Moond	...
2.	23DR0129	Raj Kumar	...
3.	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
1.	2014MP0016	Chandra Roy	The wavelet transformation involving first fractional Hankel transformation	2015
2.	2013MP0042	D. Biswal	Hankel-Clifford transformation and pseudo-differential operator	2014
3.	2012MP0028	Kanailal Mahato	A study on pseudo-differential operators	2013
4.	2011MP0004	Santanu Manna	A study of fractional Fourier transform and continuous wavelet transform	2012
5.	2010MP0007	B. S. Kumbhakar	An introduction to fractional Fourier transform	2011

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

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

Editorship:

1. Asian-European Journal of Mathematics (World Scientific Publishing)/ (Since November 2024)

Membership of Professional Societies:

1. Fellow-Institute of Mathematics and its Applications (FIMA)
2. Life Membership of International Society for Analysis, Its Applications and Computations (ISAAC)
3. Annual Membership of American Mathematical Society.

4. Life Membership of the Indian Science Congress Association.
5. Life membership of Indian Mathematical Society.
6. Life Membership of Ramanujan Mathematical Society.
7. Life membership of Calcutta Mathematical Society
8. Life membership of Mathematical Society Banaras Hindu University, Varanasi.
9. Life membership of Academy of Progress of Mathematics, Banaras Hindu University, Varanasi.
10. Life membership of Society of Applied Mathematics, Indian School of Mines, Dhanbad.

Reviewer of Some Reputed Journals:

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

29. Transactions on Signal Processing (IEEE)
30. Zentralbatt Maths (European Mathematical Society)
31. Applied Mathematics Letter (Elsevier)
32. Boletim da Sociedade Paranaense de Matemátic
33. Investigations of Mathematical Sciences
34. Thai Journal of Mathematics

Travel Grants for International Conference/Collaboration work:

1. International Society for Analysis, its Applications and Computation (ISAAC 2023) University of Sao Paulo, Campus Ribeirao Preto, Brazil. **[SERB: MATRICS Project No.: MTR/2021/000193] (2023)**.
2. International conference on Subdivision; Geometric and Algebraic Methods; Isogeometric Analysis and Refinability, (SMART 2022), University of Bologna, Italy at Rimini, Italy. **[IIT (ISM)] (2022)**.
3. Collaboration work at Steklov Mathematical Institute / People Friendship University, Moscow, Russia under Indo-Russian project under grant no. INT/RU/RSF/P-01 (2018)
4. International conference "Strobl18" Harmonic Analysis and Applications, Strobl, Austria **[IIT (ISM)] (2018)**
5. 7th Conference on Function Spaces at Southern Illinois University, Edwardsville, USA **[ISM + Host Institute] (2014)**.
6. International Conference on Applied & Computational Mathematics at Ankara, Turkey **[CSIR + ISM] (2012)**.
7. International Conference on Applied Mathematics & Approximation Theory at Ankara, Turkey, **ISM (2012)**.
8. International Congress of Mathematician (ICM-2010) at Hyderabad - **ICM-(2010)**.
9. International Conference on Approximation Theory and Signal Analysis at Lindau, Germany, **ISM (2009)**.
10. International Conference at Halmholtz Zenturm Munchen, Germany, **[DST + Host Institute] (2007)**.

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

1. Organized a "National Conference on Harmonic Analysis and Applications", during December 02-04, 2022 as a convener.
2. 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.
3. Organized a Short Term Training Programme on "Non-linear Analysis and Optimization", during December 01-05, 2017 as a co-coordinator.
4. Organized a Short Term Training Programme on "Nonlinear Analysis and its Application to Optimization Techniques", during August 18 - 22, 2017 as a co-coordinator.
5. Organized a Short Term Advanced Training Programme on "Integral Transformations, Distributions and Wavelet Analysis", during December 14-18, 2015 as a coordinator.
6. 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):

1. Departmental Time-Table in-charge since February 14, 2022.
2. DPGC convener since July 2018.
3. Chief Warden Diamond Hostel during July 01, 2019 - June 30, 2020.
4. Warden Diamond Hostel during June 01, 2018 - June 30, 2019.
5. Coordinator of M. Tech (Data Analytics) course continuously from Session 2019-2020.
6. JRF in-charge (Mathematics & Computing / Applied Mathematics) since September 2018.
7. Member of central library committee during June 01, 2015 - May 31, 2018.
8. Coordinator of M. Tech (M & C) Integrated course during Session 2011-12 to June 2019.
   (II- External:)
9. Member of the Board of the school of Physical Sciences, Mizoram University, since October 3, 2022.

List of Major Publications (SCI/SCIE):

1. **Akhilesh Prasad**, S. Ranjan, An operational calculus of μ^{th} order Mehler-Fock transform, *Complex Anal. Oper. Theory*, **19** (2), pp. 1-33, (2025). **(Springer-Birkhauser)**.
2. R. K. Verma and **Akhilesh Prasad**, Besov-type spaces associated with Dunkl wavelet transform on $\mathbb{R}$, *Math. Methods Appl. Sci.*, DOI: 10.1002/mma.10769, (2025). **(Wiley)**.
3. **Akhilesh Prasad**, U. K. Mandal and S. Ranjan, The μ^{th} order Mehler-Fock transform and allied pseudo-differential operator, *Integral Transforms Spec. Funct.,* **36** (3), pp. 163-175, (2025). **(Taylor & Francis)**.
4. C. Roy, T. Kumar, **Akhilesh Prasad**, and G. K. Jha, Pseudo-differential operators associated with a pair of quadratic-phase Hankel transformations, *J. Pseudo-Differ. Oper. Appl.*, **16** (1), Article number: 05, pp. 1-26, (2025). **(Springer-Birkhauser)/ SCIE**.
5. A. K. Gupt and **Akhilesh Prasad**, The Heat Kernel in the Framework of the Lebedev-Skalskaya Transform, *Appl. Anal.,* DOI: 10.1080/00036811.2024.2431613, (2024). **(Taylor & Francis)/SCIE**.
6. K. L. Mahato, S. Arya and **Akhilesh Prasad**, Pseudo-differential operators associated with Gyrator transform, *Hacet. J. Math. Stat.*, DOI: 10.15672/hujms.1471348, (2024). **(DergiPark)**.
7. S. Varghese, **Akhilesh Prasad** and M. Kundu, Properties and applications of quaternion quadratic phase Fourier transforms, *J. Pseudo-Differ. Oper. Appl.*, **15** (4), Article number: 84, pp. 1-26 (2024). **(Springer-Birkhauser)**.
8. R. K. Verma and **Akhilesh Prasad**, SG pseudo-differential operators in Dunkl setting, *Georgian Math. J.,* DOI: 10.1515/gmj-2024-2072, (2024). **(De Gruyter)**.
9. C. Roy, T. Kumar,**Akhilesh Prasad**, and G. K. Jha, The wavelet transformation associated with quadratic-phase Hankel transform, *Natl. Acad. Sci. Lett.* DOI: 10.1007/s40009-024-01423-2, (2024). **(Springer)**.
10. **Akhilesh Prasad** and M. Kundu, Spectrum of quaternion signals associated with quaternion linear canonical transform, *J. Franklin Inst.*, **361** (2), pp. 764-775 (2024). **(Elsevier)**.

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

12. A. K. Gupt and **Akhilesh Prasad**, The infinite-order integro-differential operator related to Lebedev-Skalskaya transform, *J. Pseudo-Differ. Oper. Appl.*, **15** (2), Article number: 21, pp. 1-16 (2024). **(Springer-Birkhauser)**

13. **Akhilesh Prasad**, R. K. Verma and S. K. Verma, Wavelet transform associated with Dunkl transform, *Integral Transforms Spec. Funct.* **35** (9), pp. 481-496, (2024). **(Taylor & Francis)**.

14. 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 Math. Sin. (Engl. Ser.)*, **40** (6), pp. 1420–1430, (2024). **(Springer)**.

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

16. J. S. Maan and **Akhilesh Prasad**, Index Whittaker transform for Boehmians, *Indian J. Pure Appl. Math.*, **55**(2), pp. 489-500-315 (2024). **(INSA/Springer)**.

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

18. U. K. Mandal and **Akhilesh Prasad**, The generalized Kontorovich-Lebedev transform and associated operators, *Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A Mat.* RACSAM, **117** (3), Article: 126, pp. 1-15, (2023). **(Springer)**.

19. M. Kundu and **Akhilesh Prasad**, Pseudo-differential operator in quaternion space, *Math. Methods Appl. Sci.*, **46**(9), pp. 10749-10766, (2023). **(Wiley)**.

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

21. **Akhilesh Prasad** and A. Kumar, Canonical potential and L^p-Sobolev space involving linear canonical Fourier transform, *Integral Transforms Spec. Funct.* **34**(4), pp. 295-315 (2023). **(Taylor & Francis)**.

22. A. K. Gupt, **Akhilesh Prasad** and U. K. Mandal, The fractional maximal and Riesz potential operators involving the Lebedev-Skalskaya transform, *Proc. Natl. Acad. Sci., Sect. A Phys. Sci.*, **93** (4), pp. 613-620, (2023). **(Springer) / SCIE**.

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

24. P. B. Sharma and **Akhilesh Prasad**, Abelian theorems for quadratic-phase Fourier wavelet transform, *Proc. Natl. Acad. Sci., Sect. A Phys. Sci.*, **93** (1), pp. 75-83, (2023). **(Springer)**.

25. U. K. Mandal, **Akhilesh Prasad** and A. K. Gupt, Reverse convolution inequalities for Lebedev-Skalskaya transforms, *Forum Math.*, **34** (4), pp. 1095-1107 (2022). **(De Gruyter)**.

26. A. Kumar and **Akhilesh Prasad**, Wigner-Ville distribution function in the framework of linear canonical transform, *J. Pseudo-Differ. Oper. Appl.*, **13** (3), Article number: 38, pp. 1-17 (2022). **(Springer-Birkhauser)**.

27. M. Kundu and **Akhilesh Prasad**, Uncertainty principles associated with quaternion linear canonical transform and its estimates, *Math. Methods Appl. Sci.*, **45** (8), pp. 4772-4790, (2022). **(Wiley)**.

28. M. Kundu and **Akhilesh Prasad**, Convolution, correlation and spectrums of functions associated with linear canonical transform, *Optik*, **249** (1) Article ID: 168256 (2022). **(Elsevier).**
29. J. S. Maan and **Akhilesh Prasad,** Abelian theorems in the framework of distributional index Whittaker transform, *Math. Commun.* **27** (1), pp. 1-9, (2022).
30. U. K. Mandal and **Akhilesh Prasad**, Lebedev-Skalskaya transforms and allied operators on certain function spaces, *Integral Transforms Spec. Funct.* **33** (4), pp. 320-340, (2022). **(Taylor & Francis).**
31. **Akhilesh Prasad** and Manoj K. Singh, Product and commutators of pseudo-differential operators involving Fourier-Jacobi transform, *Comm. Math. Stat.* **10** (1), pp. 67-84 (2022). **(Springer).**
32. **Akhilesh Prasad** and Z. A. Ansari, The wave packet transform in the framework of linear canonical transform, *Int. J. Wavelets Multiresolut. Inf. Process.*, **20** (2), Article No. 1500521, (16 pp.) (2022). **(World Scientific)**.
33. J. S. Maan and **Akhilesh Prasad**, Weyl operator associated with index Whittaker transform, *J. Pseudo-Differ. Oper. Appl.*, **13** (3), Article number: 27, (2022). **(Springer-Birkhauser)**.
34. P. B. Sharma and **Akhilesh Prasad**, Convolution and product theorems for the quadratic-phase Fourier transform, *Georgian Math. J.*, **29** (4), pp. 595-602, (2022). **(De Gruyter)**.
35. M. Kundu, **Akhilesh Prasad,** and R. K. Verma, Multidimensional linear canonical transform and convolution, *J. Ramanujan Math. Soc.* **37** (2), pp. 159-171, (2022).
36. **Akhilesh Prasad** and P. B. Sharma, Pseudo-differential operator associated with quadratic-phase Fourier transform, *Bol. Soc. Mat. Mex.,* **28** (2), Article number: 37, (2022) **(Springer-Birkhauser)**.
37. **Akhilesh Prasad,** J. S. Maan and S. K. Verma, Wavelet transforms associated with the index Whittaker transform, *Math. Methods Appl. Sci.*, **44** (13), pp. 10734-10752, (2021). **(Wiley)**.
38. Z. A. Ansari and **Akhilesh Prasad**, Abelian theorems and Calderón's reproducing formula for linear canonical wavelet transform, *J. Pseudo-Differ. Oper. Appl.*, **12** (1), Article: 4, (2021). **(Springer-Birkhauser)**.
39. U. K. Mandal and **Akhilesh Prasad**, Lebedev-Skalskaya transforms on certain function spaces and associated pseudo-differential operators, *Integral Transforms Spec. Funct.,* **32** (2), pp. 113-133, (2021), **(Taylor & Francis)**.
40. **Akhilesh Prasad,** and U. K. Mandal, The Kontorovich-Lebedev-Clifford transform, *Filomat.* **34** (14), pp. 4811-4824 (2021).
41. T. Kumar and **Akhilesh Prasad,** Pseudo-differential operators involving linear canonical Hankel transformations on some ultra-differentiable function spaces, *Math. Methods Appl. Sci.*, **44** (6), pp. 4686-4700, (2021). **(Wiley)**.
42. **Akhilesh Prasad** and M. Kundu, Linear canonical wave packet transform, *Integral Transforms Spec. Funct.*, **32** (11), pp. 893-911, (2021), **(Taylor & Francis)**.
43. **Akhilesh Prasad**, T. Kumar and A. Kumar, Convolution for a pair of quadratic-phase Hankel transforms, *Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A Mat.* RACSAM, **114** (3), Article: 40, pp. 1-15, (2020). **(Springer).**
44. S. K. Verma and **Akhilesh Prasad**, Characterization of Weyl operator in terms of Mehler-Fock transform, *Math. Methods Appl. Sci.*, **43** (15), pp. 9119-9128, (2020). **(Wiley)**.
45. **Akhilesh Prasad** and Z. A. Ansari, The composition of linear canonical wavelet transforms on generalized function spaces, *Filomat,* **34** (12), pp. 2457-2469, (2020).

46. **Akhilesh Prasad** and P. B. Sharma, The Quadratic-Phase Fourier Wavelet Transform, *Math. Methods Appl. Sci.*, **43** (4), pp. 1953-1969, (2020). **(Wiley)**.

47. **Akhilesh Prasad** and P. K. Maurya, The fractional Hankel-type integral wavelet packet transformation, *J. Anal.*, **28** (1), 225-234 (2020) **(Springer)**.

48. **Akhilesh Prasad** and Z. A. Ansari, Approximation of linear canonical wavelet transform on the generalized Sobolev spaces, *J. Pseudo-Differ. Oper. Appl.* **10** (4), pp. 855-881, (2019). **(Springer-Birkhäuser).**

49. **Akhilesh Prasad,** P. Kumar and T. Kumar, Product of continuous fractional wave packet transforms, *Int. J. Wavelets Multiresolut. Inf. Process.*, **17** (4), Article ID: 1950021 (09 pages), (2019). **(World Scientific)**.

50. **Akhilesh Prasad,** U. K. Mandal and S. K. Verma, Zero-order Mehler-Fock transform and Sobolev- type space, *Math. Inequal. Appl.*, **22** (2), pp. 761-775. (2019).

51. **Akhilesh Prasad** and S. K. Verma, Heat kernel in the framework of zero order Mehler-Fock transform, *Complex Anal. Oper. Theory,* **13** (7), pp. 3235-3249. (2019), **(Springer-Birkhäuser).**

52. **Akhilesh Prasad** and T. Kumar, A pair of linear canonical Hankel transformations of random order, *Mediterr. J. Math.,* **16** (6) Article 150 (18 pages), (2019), **(Springer-Birkhäuser).**

53. **Akhilesh Prasad** and Z. A. Ansari, Continuous wavelet transform involving linear canonical transform, *Natl. Acad. Sci. Lett.* **42** (4), pp. 337-344. (2019), **(Springer)**.

54. **Akhilesh Prasad** and S. K. Verma, The Mehler-Fock-Clifford transform and pseudo-differential operator on function spaces, *Filomat*, **33** (8), pp. 2457-2469, (2019).

55. **Akhilesh Prasad** and Manoj K Singh, Composition of pseudo-differential operators associated with Jacobi differential operator, *Proc. Natl. Acad. Sci., Sect. A Phys. Sci.*, **89** (3), pp. 509-516, (2019). **(Springer)**.

56. **Akhilesh Prasad** and U. K. Mandal, Two versions of pseudo-differential operators involving Kontorovich-Lebedev transform in $L^2(\mathbb{R}_+; x^{-1}dx)$, *Forum Math.*, **30** (1), pp. 31-42, (2018). **(De Gruyter)**.

57. **Akhilesh Prasad** and T. Kumar, A pair of linear canonical Hankel transformations and associated pseudo-differential operators, *Appl. Anal.*, **97** (15), pp. 2727-2742, (2018). **(Taylor & Francis)**.

58. **Akhilesh Prasad** and U. K. Mandal, The Kontorovich-Lebedev transform and its associated pseudo-differential operator, *Math. Methods Appl. Sci.*, **41** (1), pp. 46-57, (2018). **(Wiley)**.

59. **Akhilesh Prasad**, S. K. Verma and U. K. Mandal, The convolution for zero order Mehler-Fock transform and pseudo-differential operator, *Integral Transforms Spec. Funct.*, **29** (3), pp. 189-206 (2018). **(Taylor & Francis)**.

60. **Akhilesh Prasad** and S. K. Verma, Continuous wavelet transform associated with zero order Mehler-Fock transform and its composition, *Int. J. Wavelets Multiresolut. Inf. Process.*, **16** (6), Article ID: 1850050 (16 pages), (2018). **(World Scientific)**.

61. **Akhilesh Prasad** and U. K. Mandal, The Kontorovich-Lebedev transform and Sobolev type spaces, *Complex Anal. Oper. Theory*, **12** (3), pp. 669-681, (2018). **(Springer-Birkhäuser)**.

62. **Akhilesh Prasad** and K. Mahato, On the Sobolev boundedness results of the product of pseudo-differential operators involving a couple of fractional Hankel transforms, *Acta Math. Sin. (Engl. Ser.)*, **34** (2), pp. 221-232, (2018). **(Springer)**.

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Invited Talk:

1. 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 $\mu^t h$ order Mehler-Fock transform")
2. 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")
3. Instructional School for Mathematical Foundation (ISMF 2022) during October 08-23, 2022 organized by Indian Institute of Technology, Patna.
4. 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").
5. 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.
6. 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.
7. 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.
9. 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.
10. 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").

11. 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").
12. 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").
13. 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").
14. 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**).
15. 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:

1. 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").
2. 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").
3. 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").
4. 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").
5. 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").
6. 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").
7. 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").

8. 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").
9. 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").
10. 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.
11. International Conference on Analysis and Application (December; 22-25, 2003), Department of Mathematics, B.H.U. Varanasi.
12. International Conference on Geometry, Analysis and Applications (August; 21-24, 2000), Department of Mathematics, B.H.U. Varanasi.

National:

1. 80th Annual conference of the Indian Mathematical Society (December 27-30, 2014) at Department of Applied Mathematics, Indian School of Mines, Dhanbad (Participated)
2. 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"
3. 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**).
4. 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").
5. 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")
6. 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").
7. 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.
8. 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.
10. 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").

11. The XVI Annual Conference of the Jammu Mathematical Society (March; 01-03, 2006) at Department of Mathematics, University of Jammu.
12. 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").
13. 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").
14. National Symposium on Scientific Computing with Application to Partial Differential Equations (Nov; 19-21, 2005), at Department of Mathematics, Indian Institute of Technology, Kanpur.
15. 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").
16. National Board of Higher Mathematics, Olympiad Problem Solving Camp. (November; 25-28, 2002), Department of Mathematics, B.H.U Varanasi.
17. 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").