Curriculum Vitae

DR. MANISH KUMAR
Assistant Professor,
Birla Institute of Technology and Science-Pilani,
Hyderabad Campus, Jawahar Nagar,
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Andhra Pradesh-500078, India.

Born: June 1, 1984 in Varanasi, India
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Education

2005 Bachelor of Science, Purvanchal University, Varanasi, India.
2007 Master of Science in Mathematics, Banaras Hindu University, Varanasi, India.
2012 Ph.D. in Mathematics, Indian School of Mines, Dhanbad, India.
Advisor: Dr. Akhilesh Prasad
Thesis: *A study of certain pseudo-differential operators on function and distribution spaces.*

Awards

2009 to 2010 University Grants Commission, Government of India, New Delhi: Research Fellowship.
2010 to 2011 Council of Scientific & Industrial Research, Government of India, New Delhi: Junior Research Fellowship.
2011 to 2012 Department of Science & Technology, Government of India, New Delhi: Junior Research Fellowship.

Achievements

2009 CSIR JRF NET (Mathematical Sciences), All India Rank - 163.
2010 GATE (Mathematics), All India Rank - 272.

Research interests

Pseudo-differential operators, distribution theory, wavelet analysis and its applications, digital image processing.

Publications

1. A. Prasad and M. Kumar, Continuity of pseudo–differential operator $h_{\mu,a}$ involving Hankel translation and Hankel convolution on some Gevrey spaces, *Integral Transforms Spec. Funct.*, Vol. 21, No. 6, pp. 465–477, 2010. (Taylor & Francis).
2. R.S. Pathak, A. Prasad and M. Kumar, n-Dimensional Sobolev type spaces involving Hankel transform, *Appl. Math. Comput.*, Vol. 218, No. 3, pp. 899–905, 2011. (Elsevier).
3. A. Prasad and M. Kumar, Product of two generalized pseudo-differential operators involving fractional Fourier transform, *J. Pseudo-Differ. Oper. Appl.*, Vol. 2, No. 3, 355–365, 2011. (Birkhäuser).
4. A. Prasad, M. Kumar and Devdeep Roy Choudhury, Color image encoding using fractional Fourier transformation associated with wavelet transformation, *Optics Communications.*, Vol. 285, pp. 1005–1009, 2012. (Elsevier).
5. R.S. Pathak, A. Prasad and M. Kumar, An n-Dimensional pseudo-differential operator involving the Hankel transformation, *Proc. Indian Acad. Sci. Math. Sci.*, Vol. 122, No. 1, pp. 99–120, 2012. (Springer).
6. R.S. Pathak, A. Prasad and M. Kumar, Fractional Fourier transform of tempered distributions and generalized pseudo-differential operator, *J. Pseudo-Differ. Oper. Appl.*, Vol. 3, No. 2, pp. 239–254, 2012 (Birkhäuser).
7. A. Prasad and M. Kumar, Continuity of Hankel potential involving Hankel translation and Hankel convolution on certain ultradifferentiable function spaces, *Proceedings of the International Conference on Mathematical Sciences*, pp. 127–140, 2011.
8. A. Prasad and M. Kumar, Boundedness of pseudo-differential operator involving fractional Fourier transformation, communicated in *Internat. J. Math.*, 2011. (World Scientific).
9. R.S. Pathak and M. Kumar, Wavelet packets in Sobolev space $H^s(\mathbb{R})$, (communicated).
10. M. Kumar, Gray-scale image encryption using two stage random shift cipher associated with discrete wavelet transform, (communicated).
11. M. Kumar and A. Singh, Color image encoding unsing two stage random shift cipher associated with discrete wavelet transformation, (communicated).
12. M. Kumar, D. C. Mishra and R. K. Sharma, Color image encoding using three stage random shift chpher associated with discrete fractional Fourier transformation, (communicated).

Session Chair

I chaired a session at the International Congress in Honour of Prof. H. M. Shrivastava on his 70th Birth Anniversary at Uludag University, Bursa, Turkey Organized by Uludag University, Faculty of Arts and Science, Department of Mathematics during August 18-21, 2010 in Bursa, Turkey. The specified details about the chair persons are available at the following link : `http://homepage.uludag.edu.tr/srivastava/program.htm`.

International Seminars/Conferences

1. Satellite Conference on International Congress of Mathematicians 2010 (ICM 2010) on Mathematics in Science and Technology during August 14-17, 2010 in Delhi, India and presented a paper entitled "Continuity of pseudo- differential operator $\mathscr{H}_{\mu,a}$ involving Hankel translation and Hankel convolution on a Gevrey space".
2. International Congress in Honour of Prof. H. M. Shrivastava on his 70th Birth Anniversary at Uludag University, Bursa, TURKEY Organized by Uludag University, Faculty of Arts and Science, Department of Mathematics during August 18-21, 2010 in Bursa, Turkey and gave a talk entitled "n- Dimensional Sobolev type spaces involving Hankel transformation".
3. International Conference on Mathematical Sciences in Honour of Prof. A. M. Mathai at Department of Statistics during January 03-05, 2011 in St. Thomas College Pala, Kottayam, Kerala, India and presented a paper entitled "Continuity of Hankel potential involving Hankel translation on certain ultradifferentiable function spaces".
4. 7^{th} International congress on Industrial & Applied Mathematics during July 18-22, 2011 in Vancouver, British Columbia, CANADA and presented a poster entitled "Continuity of Hankel potential involving Hankel translation on certain ultradifferentiable function spaces".

National Seminars/Conferences

1. Silver Jubilee Conference of the Mathematical Society, "Mathematical Modeling of Real Life problems" during December 22-24, 2009, Department of Mathematics, Banaras Hindu University, India and presented a paper entitled "Continuity of Hankel potential involving Hankel translation and Hankel convolution on some Gevrey spaces".
2. 25^{th} Annual Conference of the Ramanujan Mathematical Society during May 03-05, 2010, Department of Mathematics, Dr. B R Ambedkar National Institute of Technology, Jalandhar, Punjab.
3. 26^{th} Annual Conference of the Mathematical Society on "Recent Trends in Analysis and Modeling" during 28-29, 2010, Department of Mathematics, Banaras Hindu University, India and presented a paper entitled "Continuity of Hankel potential involving Hankel translation and Hankel convolution on certain ultradifferentiable function space".

Summer/Winter/Training Programme

1. Attended the "Summer Programme in Mathematics", (SPIM - 2007) during June 18 to July 06, 2007, Organized by "Harish-Chandra Research Institute" Chhatnag Road, Jhunsi, Allahabad, India.
2. Attended the "Advanced Training Programme in Functional Analysis-2009" during June 21 to July 03, 2010, Organized by DST-Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, India.
3. Attended the "Workshop on Multivariate Analysis: Matrix Methods" during November 28 to December 03, 2011, Organized by DST-Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, India.
4. Attended the "International Workshop on Wavelets, Frames and Applications" during December 15-21, 2011, Organized by Kirori Mal College, Department of Mathematics, University of Delhi, India.
5. Attended the "Training Programme on Integral Transforms, Wavelets, Distribution Theory and Applications" during July 12-21, 2012, Organized by DST-Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, India and presented a paper entitled "Color image encoding using fractional Fourier transformation associated with wavelet transformation".

Membership of Professional Bodies, Societies, etc.

1. Member of Society for Industrial & Applied Mathematics (SIAM).
2. Life Member of Society of Applied Mathematics (SAM).
3. Life Member of International Association of Engineers (IAENG).

Computer skill

MS-DOS, MS-Windows Installation of Linux/Fedora, M. S. Office, MATLAB 7.5, Unix/Linux, LATEX2e, Internet.

Sincerely,

Manish Kumar

November 24, 2012