Maths/261
1-11-2011

Dr. Renu Jain

Dr. Renu Jain (born on October 06, 1956) obtained her B.Sc. degree in 1974 and M.Sc.(Mathematics) degree in 1977 from Jiwaji University, Gwalior . She was awarded UGC Junior Research for pursuing her Ph.D. in Mathematics which she completed in 1983 from Jiwaji University ,Gwalior. She served as lecturer from March 1981 to1985 against leave vacancy and on ad-hoc basis in MP Govt. Colleges. Dr. Jain joined the School of Mathematics and Allied Sciences, Jiwaji University, Gwalior, as a Lecturer in 1985, became Reader in 1987 on a direct selection post and then Professor in 1998. Dr. Jain's research interests include Lie Theory and Special Functions , Fractional Calculus and the Mathematical Modelling of Biological and Ecological Systems. In 1989 she was awarded Nehru Centenary British (Commonwealth) Fellowship for working as a Post Doctoral Fellow in Imperial College ,London for one year. She has supervised ten Ph.D. and thirty five M.Phil. students so far. She has published thirty six research papers in various journals and proceedings . She has organized several conferences and workshops. She has delivered invited lectures in various Conferences and attended several Workshops& Symposia. Dr. Jain is presently working as Head, School of Mathematics and Allied Sciences and Co-ordinator , M.Sc.(Computer Science) . She is chairing Equal Opportunity Cell and SHAW cell of Jiwaji University. She is life member of six academic societies and has held different executive positions in these societies. At present Dr. Jain is Member, Editorial Board of the Vikram Journal of Mathematics,Vikram University ,Ujjain and Vice-President of Gwalior Academy of Mathematical Sciences. She is also reviewer of various national and international Journals.

Selected Publications

1.**Renu Jain**, Rajiv Saxena and Rajshree Mishra , Convolution Theorem for Fractional Fourier Transform : A Fractional Calculus Approach, Proceedings of International Conference of Applied Mathematics and EASIAM Conference (AMIC-10),Malaysia, pp39-46, June 2010.

2.S.K.Sharma and **Renu Jain** , On Symmetry Operators and Canonical Equations for Basic Analogue of Meijer's G-Function, Journal of the Indian Math.Soc.,Vol.76 ,(2009) ,151-158.

3.Manoj Sharma and **Renu Jain** , A note on generalized M-Series as a Special Function of Fractional Calculus . Fract.Calc.Appl.Ana.12, No.4 (2009),449-452.

4.Kishen Sharma and **Renu Jain**, Lie-theory and q-Appell Functions, Proc. Nat. Acad. Sci. India,77(A),III, 2007.

5. **R.Jain** , O.P. Misra, and K.K. Sharma, Stability Analysis of a Resource Based Competing Species System, Ind. Jour Pure.Applied Maths 33 (11), 2002, 165-170 .

R Jain

Enclosure

List of Research Papers

1. Multiplier Representation and Generating functions. Comment. Math. Univ. Sancti. Pauli, Vol. 30 No.2,1981(Japan).
2. Multiplier Representation and Generating Functions H_2 and ψ_1 ,Vijnana Parishad Anusandhan Patrika, Vol. 25, No.2, April 1982,167-175.
3. Lie Theory and Generating Functions of Some Classical Polynomials, Vijnana Parishad Anusandhan Patrika Vol. 26, No.3,1983,235-242.
4. Dynamical Symmetry Algebra of ${}_2F_1$ and Legendre Functions, Ganita Vol. 33, No.2,135-143.
5. Dynamical Symmetry Algebra of ${}_2F_1$ and Jacobi Polynomials, J. Indian Acad . Math. Vol. 4, No.1, 1982.
6. Dynamical Symmetry Algebra of ${}_2F_1$ and Generating Functions for Laguerre Polynomials, Journal of Jiwaji University, Vol. IX, 1981.
7. Exact Solution to Radial Heat Flow Problems in Human Body, Proc. Nat. Acad. Sci. India.59 (A) I, 1989.
8. Certain Properties of the I- Function, Proc. Nat. Acad. Sci. India. 59(A), II, 1989.
9. Saxena's I- Function and Heat Conduction in a Rod under Specific Boundary Conditions, Jour. Ind. Acad. Maths. (1995), Vol 17, No 1,50-54.
10. Effect of Excessive Heating due to External Heat Source on Human Subjects., Proceedings Nat. Conf. India. Applied Math. II,1994.
11. Some Integrals Involving Kampe de Feriet Series and I-function, Kyungpook Mathematical Journal, Vol. 36 Number 1 (1996) 53-62.
12. Hypergeometric Solution of Temperature Distribution Problems in Human Dermal Regions, Ganita Sandesh. Vol. 10, No 1 , June 1996, 27-34.
13. An Exact Solution to a Temperature Distribution Problems in Human Limbs under Extreme Cold Environmental Conditions, Journal of MA.C.T. , Vol. 31 (1998).
14. Stability Analysis of the Effect of Poaching on a Three Species Interacting System with Mutualism and Competition. Proc. Sixth National Conference on Advances in Biomechanics, Jan 1998, 163-168.
15. Thermoregulation in Human Body for Cold Environmental Conditions. J.Indian Acad. Math . Vol. 19, No.1 (1997).
16. Solution of Certain Dual Integral Equations Involving I-function, Jananabha, Vol. 29, 1999,71-78.

17. Stability Analysis of a Resource Based Competing Species System, Ind. Jour.Pure.Applied Maths 33 (11), 2002, 165-170 .

18 Confluent Hypergeometric Solution of Deterministic Epidemiological Model. , *Journal of Rajasthan Ganita Parishad.* . Vol. 17(1) 2003.

19. Some Integrals Involving I-function of Two Variables, Proceedings of the 11th Annual Conference of Vijanana Parishad of India and Symposium on Mathematical Modeling of Real Life Problem and Computer Applications, May 2005.

20. The Dynamical Symmetry Algebra of Basic Confluent Hyper Geometric Function,and Some Classical Polynomials. Ganita Sandesh, Vol. 20, No.1, 2006.

21. Double Dirichlet Average of x log x and Fractional Derivative, J.Indian Acad.Math., Vol.28 no.2, 2006.

22. Dirichlet Average of cosh x and Fractional Derivative, South East Journal of Mathematics and Mathematical Sciences.(Accepted).

23 Lie Theoretic Origin of Some Genrating Functions of I-Function, Journal of Rajasthan Ganita Parishad. Vol. 20, No. 2; 2006.

24 Lie theoretic Origin of some recurrence relations for classical basic polynomials.,Jnanabh ,Vol.36,2006,193-195.

25 . Lie-theory and q-Appell Functions, Proc. Nat. Acad. Sci. India,77(A),III, 2007.

26.Double Dirichlet Average of cos x and Fractional Derivative, Ganita Sandesh,Vol.21,No.1,2007,107-110.

27. A Pair of Unsymmetrical Fourier Kernels Involving I-Functions., Vol. 6, No.1(2007) pp. 105-110, in South East Asian J. Math. & Math. Sciences.

28. Some Generating Functions of I-Functions Involving Truesdell's F-equation Technique , Journal of Rajasthan Ganita Parishad.Vol.22 ,No.2,2008

29. Time Frequency Plane Behavioral studies on harmonic and Chirp Function with FRFT,I Maejo International Journal of Science and Technology , Vol.3, No.3,pp.459-471,2009.

30 A note on generalized M-Series as a Special Function of Fractional Calculus . Fract.Calc.Appl.Ana.12,No.4 (2009),449-452.

31. On symmetric techniques and canonical equation for basic Analogue of Fox's H- function, Proc. of International Conference on CAMIST , NIT , Rourkela.

32. Cohesive Feature Selection for Classification and Retrieval of Data ,, **Journal of Computer Science** .

33. Image Segmentation via fuzzy bins classification of feature vectors of an image, Journal of Convergence Information Technology , Seoul, South Korea.

34. On Symmetry Operators and Canonical Equations for Basic Analogue of Meijer's G-Function, Journal of the Indian Math.Soc.,Vol.76 ,(2009) ,151-158.

35. Convolution Theorem for Fractional Fourier Transform : A Fractional Calculus Approach, Proceedings of International Conference of Applied Mathematics and EASIAM Conference (AMIC-10),Malaysia,pp39-46, June 2010.