Dr. Vinita Devi

Department of Mathematics

Bhakt Darshan Gov. P.G
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Education

Doctor of Philosophy (Ph.D.)

Year	**2020**
Institute	**Indian Institute of Technology (Banaras Hindu University)** , *Varanasi, U.P-221005, India.*
Title of Research	**Numerical Schemes Based on Matrix Approach for Mathematical Models with Integers and Non-integers Orders**
Area of Interest	**Approximation Theory, Wavelet Theory, fractional Calulus, Partial Differential Equations, Integral Equations**
Department	**Mathematical Sciences**

Master of Science (M.Sc.)

Year	**2014**
University	**Gurukul Kangri University Haridwar, India**
Subject	**Mathematics**

Master of Science (B.Sc.)

Year	**2012**
College	**S.S.D.P.C, Girls P.G College Roorkee, India**
Subjects	**Mathematics, Physics, Chemistry**

Computer Skills

Microsoft Office	Word, Excel, Powerpoint
Typesetting Software	Latex
Coding	C++, Mat Lab, and Mathematica.

Honors Awards

- I have qualified NET/JRF-December 2015 with All India Rank-125 (National Level Exam)
- I have qualified NET June 2016 with all India rank 77 (National Level Exam)

Publications

- **Vinita Devi**, R.K. Maurya, V.K. Patel, V.K. Singh, "Lagrange Operational Matrix Methods to Lane–Emden, Riccati's and Bessel's Equations", International Journal of Applied and Computational Mathematics 5 (3), 79
- **Vinita Devi**, R.K. Maurya, S. Singh, V.K. Singh, "Lagrange's operational approach for the approximate solution of two-dimensional hyperbolic telegraph equation subject to Dirichlet boundary conditions", Applied Mathematics and Computation 367, 124717
- R.K. Maurya, **Vinita Devi**, V.K. Singh, "Multistep schemes for one and two dimensional electromagnetic wave models based on fractional derivative approximation", Journal of Computational and Applied Mathematics, 112985
- R.K. Maurya, **Vinita Devi**, N. Srivastava, V.K. Singh, "An efficient and stable Lagrangian matrix approach to Abel integral and integro-differential equations" Applied Mathematics and Computation 374, 125005
- R.K. Maurya, **Vinita Devi**, V.K. Singh, "Stability and convergence of multistep schemes for 1D and 2D fractional model with nonlinear source term", Applied Mathematical Modelling 89, 1721-1746
- S. Singh, **Vinita Devi**, E. Tohidi, V.K. Singh, "An efficient matrix approach for two-dimensional diffusion and telegraph equations with Dirichlet boundary conditions", Physica A: Statistical Mechanics and its Applications 545, 123784

Workshops/Conferences Attended

- Participated in workshop entitled "Analysis and PDE", Leibniz Univrsity, Hannover, Germany, October 7 - 9, 2018.
- Participated in GIAN course entitled "Wavelets and their Applications in Signal and Image Processing" at Department of Mathematical Sciences, Indian Institute of Technology (Banaras Hindu University) Varanasi, India, Dec 21-25, 2017.

- Participated in GIAN course entitled "Isogeometric Methods using B-splines and NURBS" at Department of Mathematical Sciences, Indian Institute of Technology (Banaras Hindu University) Varanasi, India, Dec 16-20, 2017.
- Participated in GIAN course entitled "Theory and Computation of Singularly Perturbed Differential Equations" at Department of Mathematical Sciences, Indian Institute of Technology (Banaras Hindu University) Varanasi, India, Dec 4-8, 2017.