

# **CURRICULUM VITAE**

## **Dr. Raj Kumar Gupta**

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### **Education:**

**Ph.D.** Indian Institute of Technology (Banaras Hindu University)

**M.Sc.** Banaras Hindu University

**B.Sc.** (K. S. Saket P G College) Dr. R. M. L. Avadh University

### **Other Qualification:**

CSIR-UGC NET-JRF

GATE

### **Teaching Experience:**

Teaching U.G. and P.G. students since September 2017.

### **Research Interests:**

Hyperbolic partial differential equations, Computational fluid dynamics.

### **Publications:**

1. L. P. Singh, R. K. Gupta and T. Nath, On the decay of a sawtooth profile in non ideal magneto-gasdynamics, Ain Shams Engineering Journal 6 (2), 599-604, 2015 (Elsevier)
2. R. K. Gupta, T. Nath and L. P. Singh, Solution of Riemann problem for dusty gas flow, International Journal of Non-Linear Mechanics 82, 83-92, 2016 (Elsevier)
3. T. Nath, R. K. Gupta and L. P. Singh, Solution of Riemann problem for ideal polytropic dusty gas, Chaos, Solitons & Fractals 95, 102-110, 2017 (Elsevier)

4. T. Nath, R. K. Gupta and L. P. Singh, Evolution of weak shock waves in non ideal magnetogas dynamics, Acta Astronautica 133, 397-402, 2017 (Elsevier)
5. T. Nath, R. K. Gupta and L. P. Singh, Resonantly interacting non-linear waves in a van der Waals gas, Acta Astronautica 140, 91-95, 2017 (Elsevier)
6. T. Nath, R. K. Gupta and L. P. Singh, The Progressive Wave Approach Analyzing the Evolution of Shock Waves in Dusty Gas, International Journal of Applied and Computational Mathematics 3 (1), 1217-1228, 2017 (Springer)

### **Workshops/Courses:**

1. Participated in the discourse on Certificate for personality development in the light of Bhagavad Geeta for the session 2009-10, organised by Geeta Samiti, Malviya Bhawan, BHU, Varanasi.
2. Participated in 3rd LATEX Training Programme – 2013, held on 10, 17, 23 & 24 November 2013, organised by DST – Centre of Interdisciplinary Mathematical Sciences (CIMS), BHU, Varanasi.
3. Participated in Hands on Training Programme on MATLAB, 10-16 November, 2014, organised by DST- Centre of Interdisciplinary Mathematical Sciences (CIMS), BHU, Varanasi.
4. Participated in GIAN course on Advanced Fluid Dynamics and Applications, 12- 22 September 2016, organised by Department of Physics, IIT BHU and MHRD, Govt. of India.
5. Convener in the international workshop on Numerical Methods in ODEs/PDEs And Computational Intelligence March 18-22, 2024, organized by Department of Mathematics, K. S. Saket P. G. College, Ayodhya, UP, India

### **Conferences:**

1. Presented paper in the 29th annual conference of the Mathematical Society Banaras Hindu University on Recent Trends in Mathematical Modelling and Simulations organized by Department of Mathematics, BHU, Varanasi, during February 3-4, 2014.

2. Presented paper in the 30th annual conference of the Mathematical Society Banaras Hindu University on Mathematical Analysis and Applications organized by Department of Mathematics, BHU, Varanasi, during January 30-31, 2015.
3. Presented paper in the 31st annual conference of the Mathematical Society Banaras Hindu University on mathematical and statistical techniques and their application to science and engineering (MSTASE) organized by Department of Mathematics, DIT University, Dehradun during November 20-21, 2015.
4. Presented a paper in the International Conference on Mathematical Modeling and Simulation (ICMMS 2016) organized by Department of Mathematics, Institute of Science, BHU and Indian Academy of Mathematical Modeling and Simulation, Head Quarter IIT Kanpur during August 29-31, 2016.

**(Raj Kumar Gupta)**

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